EXHIBIT

J

FOLDER 1

PT. 2

#	ACUTE DATA PARAMETER - (Some are organism specific)	YES	NO
	renewal the original sample?		
37.	Was the daily photoperiod 16 hours light/8 hours dark?	✓	
38.	Were the surviving organisms counted daily in all test chambers?	✓	
39.	Was the test terminated at 48±1 hours (less than 47 hours invalidates the test) or 96±1 hours (less than 95 hours invalidates the test)?	✓	
40.	Was the percent survival in each concentration recorded at the end of the test?	✓	
41.	**Was the percent survival in the controls ≥90%?**	✓	
42.	Was the LC_{50} correctly determined?	✓	
43.	If the acute test was run in conjunction with a chronic test using the same species, was the acute test initiated with the second or third sample pulled for the chronic test? (Any sample other than the same sample used to initiate the chronic test is acceptable.)	NA	

Items in bold type (and shaded) are significant in that if they are answered "NO", the test is automatically deemed "not acceptable" and must be repeated to fulfill permit TMP requirements. Bold type items are numbers 3, 5, 8, 12, 15, 25, 26, and 41.

RESPONSE GUIDE

1. - 8.	Response should be "YES" or note the problem in the review
9. - 10.	If 9. is "NO", then 10. must be "YES" or the test is not acceptable
11. - 13.	If 11. is "YES", then 12. and 13. must be "YES" or the test is not acceptable
14. - 17.	If 14. is "NO", then 15., 16. and 17 must be "YES" or the test is not acceptable
18. - 43.	Response should be "YES" or note the problem in the review

RATING

ACCEPTABLE	NOT ACCEPTABLE

Comments

BIOLOGICAL MONITORING, INC.
Toxicity Test Condition Summary

Client: Omega Protein — Prepared by: Anthony Smith

NPDES Permit #: VA0003867

Experiment ID#: OMP091301-2

Test Organism: Mysidopsis bahia

Test Type: Static Acute

Organism Age at Start of Test: 4 d

Sample Tested: Outfall 002

Sample Type: Composite

Sample Collection Frequency and Dates and Times: From 09/11/01 @ 0700 to 09/12/01 @ 0700

Sample Collector: J.R. Hall — Delivered by: J.R. Hall

Test Solution Renewal Frequency: N/A

Dilution Water Used: Synthetic Seawater 091101

Test Temperature: 25 ± 1°C

No. of Replicates per conc.: 4 — No. of Organisms per Replicate: 5

Feeding prior to test: Normal — Feeding Regime: 2x daily

Chamber Size: 800 mL PP — Test Volume: 450 mL

Photo Period: 16h light/8h dark — Test Duration: 48 h

Start of Test: Date: 09/13/01 — Time: 1620

End of Test: Date: 09/15/01 — Time: 1530

Equipment:

pH Meter: SA 720 (A)
DO Meter: YSI 58 (b)
SCT Meter:YSI 33 (A)
°C Measurement: Calibrated Thermometer
Salinity: SCT Meter
Chlorine: Fisher/Porter Amperometric Titrator

Test Method Reference: U.S. EPA. 1993. Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms. EPA/600/4-90/027F.

BIOLOGICAL MONITORING, INC.
Acute Toxicity Test Data Summary

Client	Omega Protein	**NPDES PERMIT #:** VA0003867		
Test Organism	Mysidopsis bahia		**Date**	**Time**
Experiment ID	OMP091301-2	**Start Test**	09/13/01	1620
Sample Tested	Outfall 002	**End Test**	09/15/01	1530

RESULTS

Water Chemistry Analyses (Range)					
Conc. %	Temp. (°C)	D.O. (mg/L)	pH	Salinity (ppt)	Survival (%) 48 h
0 100	25 25	7.6-7.8 6.9-7.0	7.9-8.0 7.9	25 25	100 100

STATISTICAL ANALYSES

Test Method	LC50 (%)	95% Fiducial (Confidence) Limits
N/A	N/A	N/A
COMMENTS: No LC50 generated due to lack of mortality. NOAEC = 100%.		

TOXICITY TEST DATA SHEET

Experiment I.D. #: OMP091301-2 NPDES Permit #: VA0003867 Project Scientist: A. Smith

Client: Omega Protein QC Officer: NATHAN MACPHERSON

Effluent/Sample: OMP091301-2 (outfall 002) Test Organism; Species: M. bahia Org. Batch #: ABSU91101

Sample Container: PE Number of Organisms per Concentration: 20 Age: ~~48~~ 4d

Sample Type; Date and Time of Collection: Dilution Water Used: Syn. Seawater Batch #: 091101

Grab: Date: _____ Time: _____ Test Temperature: 25 ± 1°C

Composite: From: Date: 9-11-01 Time: 0700 To: Date: 9-12-01 Time: 0700 Start of Test: Date: 9/13/01 Time: ~~1420~~ AB/1620

Test Mode: Static Acute Test Duration: 48h End of Test: Date: 9/15/01 Time: ~~1530~~ NM 1530

Conc %	Test Conc #	Number of Live Organisms					Dissolved Oxygen (mg/L)					pH					Salinity 0/00					Temperature (°C)				
		0	24	48	72	96	0	24	48	72	96	0	24	48	72	96	0	24	48	72	96	0	24	48	72	96
0	A	5	5	5			7.6		7.8			8.0		7.9			25		25			25	25	25		
	B	5	5	5																						
	C	5	5	5																						
	D	5	5	5																						
100	A	5	5	5			7.0		6.9			7.9		7.9			25		25			25	25	25		
	B	5	5	5																						
	C	5	5	5																						
	D	5	5	5																						
Recorded By:		AS	BAM	NM			AS		NM			AS		NM			AD		NM			AD	NM	NM		

* mg/L as $CaCO_3$

BIOLOGICAL MONITORING, INC.

Toxicity Test Procedure Check Sheet

Test I.D.#: OMP091301-2 Permit # VA0003867 Test Containers Used: pp # of replicates/concentration: 4

Specify below volume of diluent and effluent measured out per concentration in this test:

Concentration (%) mg/L other	Diluent(mLs)	Effluent(mLs)	Total(mLs)
0	1000	0	1000
100	0	100	1000

Are all test chambers properly labeled? yes

Specify vessel type and volume used to measure and deliver effluent and diluent to test chambers:

Graduated cylinder(s) 2000____ 1000 X 500____ 250____

100____ 50____ 25____ 10____

Volumetric flask(s) 1000____ 500____ 200____ 100____

Pipet(s) 10____ 5____ 1____ Other____

Specify material (s) used to place test organisms into test chambers: wide bore pipet

Total Chlorine of sample upon arrival (mg/L) <0.01

Total Chlorine of sample after dechlorination (mg/L) NA

Exposure Chamber
Total Vessel Capacity: 500ml
Test Solution Volume: 450ml
Water Depth Constant: X
Cyclic:____

Feeding Schedule
Pretest Feeding:____
Not fed:____
Fed Daily: 2X
Fed irregularly (describe)____
Type of Food:____

Aeration
Pretest:____
None: X
Slow:____(bubbles/min)
Moderate:____
Vigorous:____
Beginning:____(hour)

Screened Animal Enclosures
Not Used: X
Used:____

Photoperiod:
16h/8h: X
other:____

Organism pretest treatment
Normal

Conditions of surviving organisms at end of test:____

Methods of Randomization employed: Random #

Comments:____

10867

SAMPLE COLLECTION - CHAIN OF CUSTODY FORM

To be completed by the person collecting the sample. See reverse side for instructions.

1. Client name: Omega Protein
2. Sampler's name: J.R. Hall
3. Sample source: Lagoon
4. Outfall/station: 002
5. Purchase order no.:
6. Affiliation:
7. NPDES permit no./County:
8. Test period for which data is being submitted:
9. *Sample relinquished by:* JR. Hall 9/12/01 *Date; Received by:* / *Date;*
   Sample relinquished by: / *Date; Received by:* 9/13/01 *Date.*

Description of Sampling Methods and Equipment

10. Type of sample collected:
    - Grab
    - Date collected
    - Time collected
    - Volume
    - Composite: ✓
    - Composite type
    - Collection period: from 9-11-01 (date) 7 AM (time) to 9-12-01 (date) 7 am (time)
11. Flow during sampling: 307,300
12. Type of container: 1-Gal. Plastic
13. Number of containers shipped: 1
14. No. of subsamples
15. Frequency
16. Volume

Condition of Effluent at Time of Collection

17. pH 7.12
18. Chlorine
19. Temperature:
    - At collection point
    - In collection device (comp. sample must be @ or below 4°C) 4° C
20. Is the sample:
    - Chlorinated
    - Dechlorinated
    - Unknown
    - Dechlorination method

Shipping Information

21. Method of shipment: Delivered
22. Date shipped: 9-13-01
23. Time: approx 11 am
24. Was the sample packed with ice for shipment? Yes
25. *Custody seal in place by* J.R. Hall *Date* 9-13-01 *Time* 8 am

Instructions to Lab

26. Type of test(s) to be performed
27. Should BMI dechlorinate the sample (Yes or No)
28. Should ammonia be measured? (Yes or No)
29. Comments

30. I certify that the above information is correct: JR Hall (Signature) (Date)

****

For BMI Use Only

Alk 100
Hard NA
BMI Sample ID# OMP091301-2 *Received by* A. Smith *Date* 9/13/01 *Time* 1830
Upon arrival at BMI: Custody seal yes Temperature 1°C pH 7.8 Chlorine 0.01 DO 7.8
On ice? yes Salinity 0 ppt Conductivity 19.06
Visual description green Sample refrigerated yes
Test ID number(s) OMP091301-2

C:\wpdocs\labforms\aplcol2.frm (V.1184)

BIOLOGICAL MONITORING, INC.
Toxicity Test Condition Summary

Client: Omega Protein

Prepared by: Anthony Smith

NPDES Permit #: N/A

Experiment ID#: RT0091301-2

Test Organism: Mysidopsis bahia

Test Type: Static Acute Reference Toxicant

Organism Age at Start of Test: 4 d

Sample Tested: Sodium Lauryl Sulfate

Sample Type: Product

Sample Preparation Dates and Times: 09/13/01 @ 1215

Sample Prepared by: A. Smith

Delivered by: N/A

Test Solution Renewal Frequency: N/A

Dilution Water Used: Synthetic Seawater 091101

Test Temperature: 25 ± 1°C

No. of Replicates per conc.: 2

No. of Organisms per Replicate: 10

Feeding prior to test: Normal

Feeding Regime: 2x daily

Chamber Size: 800 mL PP

Test Volume: 350 mL

Photo Period: 16h light/8h dark

Test Duration: 48 h

Start of Test: Date: 09/13/01

Time: 1705

End of Test: Date: 09/15/01

Time: 1615

Equipment:

pH Meter: SA 720 (A)
DO Meter: YSI 58 (b)
SCT Meter:YSI 33 (A)
°C Measurement: Calibrated Thermometer
Salinity: SCT Meter
Chlorine: Fisher/Porter Amperometric Titrator

Test Method Reference: U.S. EPA. 1993. Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms. EPA/600/4-90/027F.

BIOLOGICAL MONITORING, INC.
Acute Toxicity Test Data Summary

Client	Omega Protein	**NPDES PERMIT #:** N/A		
Test Organism	Mysidopsis bahia		**Date**	**Time**
Experiment ID	RT091301-2	**Start Test**	09/13/01	1705
Sample Tested	Sodium Lauryl Sulfate	**End Test**	09/15/01	1615

RESULTS

Water Chemistry Analyses
(Range)

Conc. ppm	Temp. (°C)	D.O. (mg/L)	pH	Salinity (ppt)	Survival (%) 48 h
0	25	6.9-7.0	8.0-8.2	25	100
1.25	25	6.8-6.9	7.9-8.2	25	100
2.5	25	6.8-6.9	7.9-8.2	25	100
5	25	6.8	7.9-8.2	25	0
10	25	6.6-6.7	7.8-8.2	25	85
20	25	6.6-6.8	7.8-8.2	25	5

STATISTICAL ANALYSES

Test Method	LC50 (ppm)	95% Fiducial (Confidence) Limits
Trimmed Spearman-Karber	**6.411**	**5.027-8.177**
COMMENTS:		

TOXICITY TEST DATA SHEET

Page ___ of ___

Experiment I.D. #: RT091301-2 NPDES Permit #: VA Project Scientist: A. Smith

Client: BMI QC Officer: NATE MARGASON

Effluent/Sample: RT091301-2097 (SCC) Test Organism; Species: M. bahia Org. Batch #: ABS091101-2

Sample Container: P Glass Number of Organisms per Concentration: 20 Age: 4d

Sample Type; Date and Time of Collection: PRODUCT Dilution Water Used: Syn. Seawater Batch #: 091101

Grab: Date: _____ Time: _____ Test Temperature: 25±1°C

Composite: From: Date: _____ Time: _____ To: Date: _____ Time: _____ Start of Test: Date: 9/13/01 Time: 1705

Test Mode: Static Acute Test Duration: 48h End of Test: Date: 9/15/01 Time: 1615

Conc or % ppm	Test Conc #	Number of Live Organisms					Dissolved Oxygen (mg/L)					pH					Salinity 0/00					Temperature (°C)				
		0	24	48	72	96	0	24	48	72	96	0	24	48	72	96	0	24	48	72	96	0	24	48	72	96
0	A	10	10	10			6.9		7.0			8.2		8.0			25		25			25	25	25		
	B	10	10	10																			25	25		
1.25	A	10	10	10			6.8		6.9			8.2		7.9			25		25			25	25	25		
	B	10	10	10																			25	25		
2.5	A	10	10	10			6.8		6.9			8.2		7.9			25		25			25	25	25		
	B	10	10	10																			25	25		
5	A	10	10	0			6.8		6.8			8.2		7.9			25		25			25	25	25		
	B	10	10	0																			25	25		
10	A	10	9	9								8.2		7.8			25		25			25	25	25		
	B	10	9	8			6.7		6.6														25	25		
20	A	10	5	1								8.2		7.8			25		25			25	25	25		
	B	10	0	0			6.6		6.6														25	25		
Recorded By:		AS	BAM	NM			AS		NM			AS		NM			AS		NM			AS	NM	NM		

* mg/L as $CaCO_3$

BIOLOGICAL MONITORING, INC.

Toxicity Test Procedure Check Sheet

Page___of___

Test I.D.#: RTO91301-1 Permit # NA Test Containers Used: _____ # of replicates/concentration: 2

Specify below volume of diluent and effluent measured out per concentration in this test:

Concentration % (mg/L) other	Diluent(mLs)	Effluent(mLs)	Total(mLs)
0	1000	0	1000
1.25	987.5	12.5	1000
2.5	975	25	1000
5	950	50	1000
10	900	100	1000
20	800	200	1000

Are all test chambers properly labeled? yes

Specify vessel type and volume used to measure and deliver effluent and diluent to test chambers:

Graduated cylinder(s) 2000_____ 1000 X 500_____ 250 X

100 X 50 X 25 X 10_____

Volumetric flask(s) 1000_____ 500_____ 200_____ 100_____

Pipet(s) 10_____ 5_____ 1_____ Other_____

Specify material (s) used to place test organisms into test chambers: wide bore pipet

Total Chlorine of sample upon arrival (mg/L) <0.01

Total Chlorine of sample after dechlorination (mg/L) NA

Exposure Chamber
Total Vessel Capacity: 800mL
Test Solution Volume: ~~400~~ 320 mL
Water Depth Constant: X
Cyclic:_____

Feeding Schedule
Pretest Feeding:_____
Not fed: X
Fed Daily:_____
Fed irregularly (describe)_____
_____
Type of Food:_____

Aeration
Pretest:_____
None: X
Slow:_____(bubbles/min)
Moderate:_____
Vigorous:_____
Beginning:_____(hour)

Screened Animal Enclosures
Not Used: X
Used:_____

Photoperiod:
16h/8h: X
other:_____

Organism pretest treatment
Normal

Conditions of surviving organisms at end of test: Normal

Methods of Randomization employed: Random #

Comments:_____

CT-TOX: BINOMIAL, MOVING AVERAGE, PROBIT, AND SPEARMAN METHODS

SPEARMAN-KARBER

TRIM:	5.00%
LC50:	6.411
95% LOWER CONFIDENCE:	5.027
95% UPPER CONFIDENCE:	8.177

CONC. ppm	NUMBER EXPOSED	NUMBER DEAD	PERCENT DEAD	BINOMIAL PROB.(%)
1.25	20.	0.	.00	.9537D-04
2.50	20.	0.	.00	.9537D-04
5.00	20.	20.	100.00	.9537D-04
10.00	20.	3.	15.00	.1288D+00
20.00	20.	19.	95.00	.2003D-02

THE BINOMIAL TEST SHOWS THAT 2.50 AND 20.00 CAN BE USED AS STATISTICALLY SOUND CONSERVATIVE 95 PERCENT CONFIDENCE LIMITS SINCE THE ACTUAL CONFIDENCE LEVEL ASSOCIATED WITH THESE LIMITS IS 99.9979 PERCENT.
AN APPROXIMATE LC50 FOR THIS DATA SET IS 8.106

RESULTS USING MOVING AVERAGE

SPAN	G	LC50	95% CONFIDENCE LIMIT	
4	.066	6.47	5.11	8.49

****** RESULTS CALCULATED BY PROBIT METHOD

ITERATIONS	G	H	GOODNESS OF FIT
7	6.330	20.34	.00

A PROBABILITY OF 0 MEANS LESS THAN 0.001

SLOPE = 2.32
95% CONFIDENCE LIMITS: -3.52 AND 8.16

LC50= 6.89
95% CONFIDENCE LIMITS: 0 AND + INFINITY

LC1 = .68
95% CONFIDENCE LIMITS: 0 AND 5.71

DATE: 9/13/01 TEST NUMBER: RT-2 DURATION: 48 hous
SAMPLE: sls SPECIES: M. bahia

METHOD	LC50	CONFIDENCE LIMITS LOWER	UPPER	SPAN
BINOMIAL	8.106	2.500	20.000	17.500
MAA	6.471	5.115	8.489	3.374
PROBIT	6.887	*******	*******	*******
SPEARMAN	6.411	5.027	8.177	3.150

NOTE: MORTALITY PROPORTIONS WERE NOT MONOTONICALLY INCREASING.
ADJUSTMENTS WERE MADE PRIOR TO SPEARMAN-KARBER ESTIMATION.

**** = LIMIT DOES NOT EXIST

BMI **BIOLOGICAL MONITORING, INC.** 11022
LABORATORY WORK ORDER

Project Manager: A. Smith

Date: 9/11/01

Assigned to: _____

Test Start Date: 9/11/01

Client: Omega Protein

Client's P.O.#: _____

Test ID#: OMP091101-1

BMI Project#: 3184

Test Description: STC Cv

Test Prefix: OMP

Test Conditions (Circle Approriate Choice)

Acute/~~Chronic~~

Organism: P.p., D.p., D.m., C.d., M.b., ~~C.v.~~ H.a., Ct

Toxicant: Outfall 006

Other: _____

Permit No.#: VA0003867

Duration: 24h, 48h, 96h, 7d, 10d, _____

Test Vol: 300 ml

Renew at: 24h, 48h, 96h, daily, none, _____

Chamber: 600 ml

Concentrations: [0, 6.25, 12.5, 25, 50, 100%]

IWC: 2

Other: 0, 0.5, 1, 2, 5, 100

Replicates: 1, 2, 3, 4, 8, 10

Other: _____

Diluent: ~~MBRW~~, Surface, Bayou seawater

Temperature: 12 ± 1° C, 20 ± 1°C, 23 ± 1°C, ~~25 ± 1°C~~

Test Salinity: ~~Freshwater~~, 13 ppt, 20 ppt

Feeding: 1x daily, 2 x daily, 3 x daily, none, as specified _____

Dechlorination Sample: Yes/~~No~~ (Circle One)

pH Adjustment to be done: Yes/~~No~~

Extra Controls: _____

Special Conditions: _____

Comments: _____

BMI **BIOLOGICAL MONITORING, INC.**
LABORATORY WORK ORDER

11023

Project Manager: A. Smith

Date: 9/11/01

Assigned to: _____

Test Start Date: 9/13/01

Client: Omega Protein

Client's P.O.#: _____

Test ID#: OMP091101-3

BMI Project#: 3184

Test Description: SAG

Test Prefix: OMP

Test Conditions (Circle Approriate Choice)

(Acute)/Chronic

Organism: P.p., D.p., D.m., C.d., M.b., (C.v.), H.a., Ct

Other: _____

Toxicant: Outfall 006

Permit No.#: VA0003867

Duration: 24h, (48h), 96h, 7d, 10d, _____

Renew at: 24h, 48h, 96h, daily, ~~none~~, _____

Test Vol: 350 mL

Chamber: 800 mL

Concentrations: ~~[0, 6.25, 12.5, 25, 50, 100%]~~

Other: _____

IWC: 2

Replicates: 1, (2), 3, 4, 8, 10

Diluent: MHRW, Surface Sign. Seawater

Other: _____

Temperature: 12 ± 1° C, 20 ± 1°C, 23 ± 1°C, ~~25 ± 1°C~~

Test Salinity: Freshwater, 13 ppt, ~~20 ppt~~

Feeding: 1x daily, 2 x daily, 3 x daily, ~~none~~, as specified _____

Dechlorination Sample: Yes/~~No~~ (Circle One)

pH Adjustment to be done: Yes/~~No~~

Extra Controls: _____

Special Conditions: _____

Comments: _____

BMI **BIOLOGICAL MONITORING, INC.**
LABORATORY WORK ORDER

11024

Project Manager: A. Smith

Date: 9/11/01

Assigned to: _____

Test Start Date: 9/13/01

Client: Omega Protein

Client's P.O.#: _____

Test ID#: OMP091101-2

BMI Project#: 3184

Test Description: SAMs

Test Prefix: OMP

Test Conditions (Circle Approriate Choice)

Acute/Chronic

Organism: P.p., D.p., D.m., C.d., M.b., C.v., H.a.,Ct

Toxicant: Outfall 002

Other: _____

Permit No.#: VA0003867

Duration: 24h, 48h, 96h, 7d, 10d, _____

Test Vol: 45 mL

Renew at: 24h, 48h, 96h, daily, none, _____

Chamber: 800 mL

Concentrations: [0, 6.25, 12.5, 25, 50, 100%]

IWC: 100

Other: 0, 100

Replicates: 1, 2, 3, 4, 8, 10

Other: _____

Diluent: MHRW, Surface, Supp. seawater

Temperature: 12 ± 1° C, 20 ± 1°C, 23 ± 1°C, 25 ± 1°C

Test Salinity: Freshwater, 13 ppt, 20 ppt

Feeding: 1x daily, 2 x daily, 3 x daily, none, as specified _____

Dechlorination Sample: Yes/No (Circle One)

pH Adjustment to be done: Yes/No

Extra Controls: _____

Special Conditions: _____

Comments: _____

BIOLOGICAL MONITORING, INC.
Toxicity Test Condition Summary

Client: Omega Protein — Prepared by: Anthony Smith

NPDES Permit #: N/A

Experiment ID#: RT0091301-1

Test Organism: Cypinodon variegatus

Test Type: Static Acute Reference Toxicant

Organism Age at Start of Test: 3 d

Sample Tested: Sodium Lauryl Sulfate

Sample Type: Product

Sample Preparation Dates and Times: 09/13/01 @ 1215

Sample Prepared by: A. Smith — Delivered by: N/A

Test Solution Renewal Frequency: N/A

Dilution Water Used: Synthetic Seawater 091101

Test Temperature: 25 ± 1°C

No. of Replicates per conc.: 2 — No. of Organisms per Replicate: 10

Feeding prior to test: Normal — Feeding Regime: Not fed

Chamber Size: 800 mL PP — Test Volume: 350 mL

Photo Period: 16h light/8h dark — Test Duration: 48 h

Start of Test: Date: 09/13/01 — Time: 1700

End of Test: Date: 09/15/01 — Time: 1600

Equipment:

pH Meter: SA 720 (A)
DO Meter: YSI 58 (b)
SCT Meter:YSI 33 (A)
°C Measurement: Calibrated Thermometer
Salinity: SCT Meter
Chlorine: Fisher/Porter Amperometric Titrator

Test Method Reference: U.S. EPA. 1993. Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms. EPA/600/4-90/027F.

BIOLOGICAL MONITORING, INC.
Acute Toxicity Test Data Summary

Client	Omega Protein	**NPDES PERMIT #:** N/A		
Test Organism	Cyprinodon variegatus		**Date**	**Time**
Experiment ID	RT091301-1	**Start Test**	09/13/01	1700
Sample Tested	Sodium Lauryl Sulfate	**End Test**	09/15/01	1600

RESULTS

Water Chemistry Analyses
(Range)

Conc. ppm	Temp. (°C)	D.O. (mg/L)	pH	Salinity (ppt)	Survival (%) 48 h
0	25	7.6-7.8	8.0-8.2	25	100
1.25	25	6.9-7.4	8.0-8.2	25	100
2.5	25	6.8-7.0	8.0-8.2	25	5
5	25	4.6-6.8	8.0-8.2	25	0
10	25	4.2-6.7	7.9-8.2	25	0
20	25	3.8-6.7	8.0-8.2	25	0

STATISTICAL ANALYSES

Test Method	LC50 (ppm)	95% Fiducial (Confidence) Limits
Spearman-Karber	**1.830**	**1.711-1.958**
COMMENTS:		

TOXICITY TEST DATA SHEET

Page ___ of ___

Experiment I.D. #: RT091301-1 NPDES Permit #: NA Project Scientist: A. Smith

Client: BMI QC Officer: NATE MARGASON

Effluent/Sample: RT091301-2097 (SG3) Test Organism; Species: M. C. variegatus Org. Batch #: ABS091101-1

Sample Container: Glass Number of Organisms per Concentration: 20 Age: 3d

Sample Type; Date and Time of Collection: Product Dilution Water Used: Synthetic Seawater Batch #: 091101

Grab: Date: ___ Time: ___ Test Temperature: 25±1

Composite: From: Date: ___ Time: ___ To: Date: ___ Time: ___ Start of Test: Date: 9/13/11 Time: 1700

Test Mode: Static Acute Test Duration: 48h End of Test: Date: 9/15/11 Time: 1600

Conc or % ppm	Test Conc #	Number of Live Organisms					Dissolved Oxygen (mg/L)					pH					Salinity 0/00					Temperature (°C)				
		0	24	48	72	96	0	24	48	72	96	0	24	48	72	96	0	24	48	72	96	0	24	48	72	96
0	A	10	10	10			7.6		7.8			8.2		8.10			25	25	25			25	25	25		
	B	10	10	10																				25		
1.25	A	10	10	10			6.9		7.4			8.2		8.10			25	25	25			25	25	25		
	B	10	10	10																				25		
2.5	A	10	1	1			6.8		7.0			8.2		8.10			25	25	25			25	25	25		
	B	10	3	0																				25		
5	A	10	0				6.8	4.6				8.2	8.0				25	25				25	25	~~25~~ NM		
	B	10	0																					~~25~~		
10	A	10	0				6.7	4.2				8.2	7.9				25	25				25	25	~~25~~		
	B	10	0																					~~25~~		
20	A	10	0				6.7	3.8				8.2	8.0				25	25				25	25	~~25~~		
	B	10	0																					25		
Recorded By:		AS	BAM	NM			AS	BAM	NM			AS	BAM	NM			AS	BAM	NM			AS	BAM	NM		

* mg/L as $CaCO_3$

BIOLOGICAL MONITORING, INC.

Toxicity Test Procedure Check Sheet

Page___of___

Test I.D.#: RT091301-2 Permit # NA Test Containers Used: PP # of replicates/concentration: 2

Specify below volume of diluent and effluent measured out per concentration in this test:

Concentration %~~mg/L~~ other	Diluent(mLs)	Effluent(mLs)	Total(mLs)
0	1000	0	1000
1.25	987.5	12.5	1000
2.5	975	25	1000
~~10~~ 5	950	50	1000
10	900	100	1000
20	800	200	1000

Are all test chambers properly labeled? yes

Specify vessel type and volume used to measure and deliver effluent and diluent to test chambers:

Graduated cylinder(s) 2000_____ 1000 X 500_____ 250 X

100 X 50 X 25 X 10_____

Volumetric flask(s) 1000_____ 500_____ 200_____ 100_____

Pipet(s) 10_____ 5_____ 1_____ Other_____

Specify material (s) used to place test organisms into test chambers: wide bore pipet

Total Chlorine of sample upon arrival (mg/L) NA

Total Chlorine of sample after dechlorination (mg/L) NA

Exposure Chamber
Total Vessel Capacity: 800mL
Test Solution Volume: 350mL
Water Depth Constant: 2
Cyclic:_____

Feeding Schedule
Pretest Feeding:_____
Not fed: X
Fed Daily:_____
Fed irregularly (describe)_____
Type of Food:_____

Aeration
Pretest:_____
None: X
Slow:_____(bubbles/min)
Moderate:_____
Vigorous:_____
Beginning:_____(hour)

Screened Animal Enclosures
Not Used: X
Used:_____

Photoperiod:
16h/8h: X
other:_____

Organism pretest treatment
Normal

Conditions of surviving organisms at end of test: Normal

Methods of Randomization employed: Random #

Comments:

BIOLOGICAL MONITORING, INC.
SUMMARY OF TEST STOCK SOLUTION PREPARATION

Client: BMI

Test ID Nos. RT091301 - 1 -2

STOCK A - MASTER STOCK SOLUTION

ID #: RT091301-2097

Compound Type: Sodium Lauryl Sulfate

Weight of Compound: 0.10006 g

Diluent Type: Syn Seawater ~~09120901~~ 091101

Volume of Diluent (units): 1000 ml

Final Concentration: 100 ppm

Prepared By: A. Smith

Date/Time: 9/13/01 1215

Substock A - ID #_____

Volume of Stock A:_____

Diluent Type:_____

Volume of Diluent:_____

Final Concentration:_____

Prepared By:_____

Date/Time:_____

Substock A - ID #_____

Volume of Stock A:_____

Diluent Type:_____

Volume of Diluent:_____

Final Concentration:_____

Prepared By:_____

Date/Time:_____

Substock A - ID #_____

Volume of Stock A:_____

Diluent Type:_____

Volume of Diluent:_____

Final Concentration:_____

Prepared By:_____

Date/Time:_____

Substock A - ID #_____

Volume of Stock A:_____

Diluent Type:_____

Volume of Diluent:_____

Final Concentration:_____

Prepared By:_____

Date/Time:_____

CT-TOX: BINOMIAL, MOVING AVERAGE, PROBIT, AND SPEARMAN METHODS

SPEARMAN-KARBER

TRIM:	.00%
LC50:	1.830
95% LOWER CONFIDENCE:	1.711
95% UPPER CONFIDENCE:	1.958

CONC. ppm	NUMBER EXPOSED	NUMBER DEAD	PERCENT DEAD	BINOMIAL PROB.(%)
1.25	20.	0.	.00	.9537D-04
2.50	20.	19.	95.00	.2003D-02
5.00	20.	20.	100.00	.9537D-04
10.00	20.	20.	100.00	.9537D-04
20.00	20.	20.	100.00	.9537D-04

THE BINOMIAL TEST SHOWS THAT 1.25 AND 2.50 CAN BE USED AS STATISTICALLY SOUND CONSERVATIVE 95 PERCENT CONFIDENCE LIMITS SINCE THE ACTUAL CONFIDENCE LEVEL ASSOCIATED WITH THESE LIMITS IS 99.9979 PERCENT.
AN APPROXIMATE LC50 FOR THIS DATA SET IS 1.850

WHEN THERE ARE LESS THAN TWO CONCENTRATIONS AT WHICH THE PERCENT DEAD IS BETWEEN 0 AND 100, NEITHER THE MOVING AVERAGE NOR THE PROBIT METHOD CAN GIVE ANY STATISCALLY SOUND RESULTS.

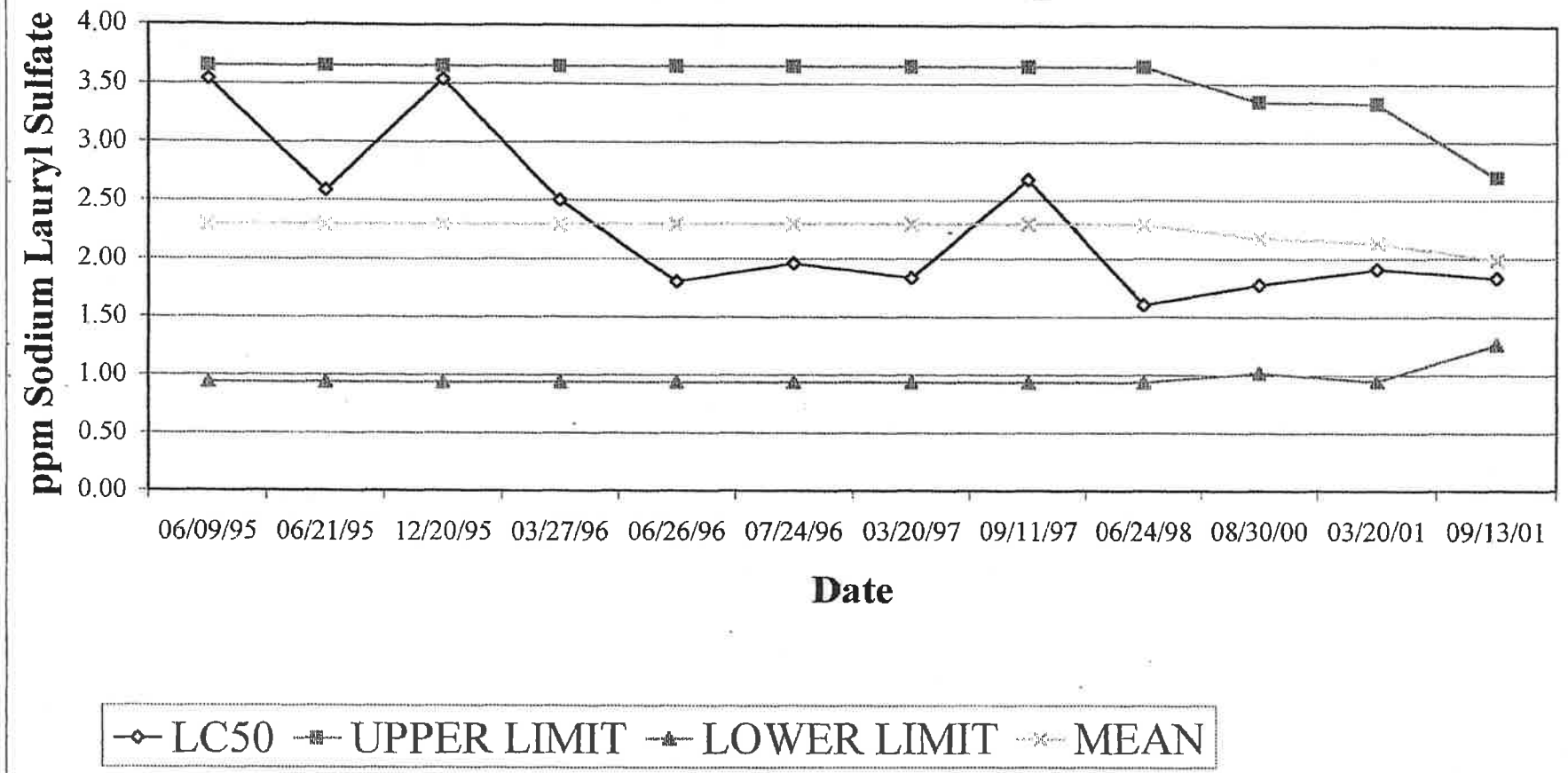
DATE: 9/13/01 TEST NUMBER: RT-1 DURATION: 48 hours
SAMPLE: sls SPECIES: C. variegatus

METHOD	LC50	CONFIDENCE LIMITS LOWER	UPPER	SPAN
BINOMIAL	1.850	1.250	2.500	1.250
MAA	*******	*******	*******	*******
PROBIT	*******	*******	*******	*******
SPEARMAN	1.830	1.711	1.958	.247

**** = LIMIT DOES NOT EXIST

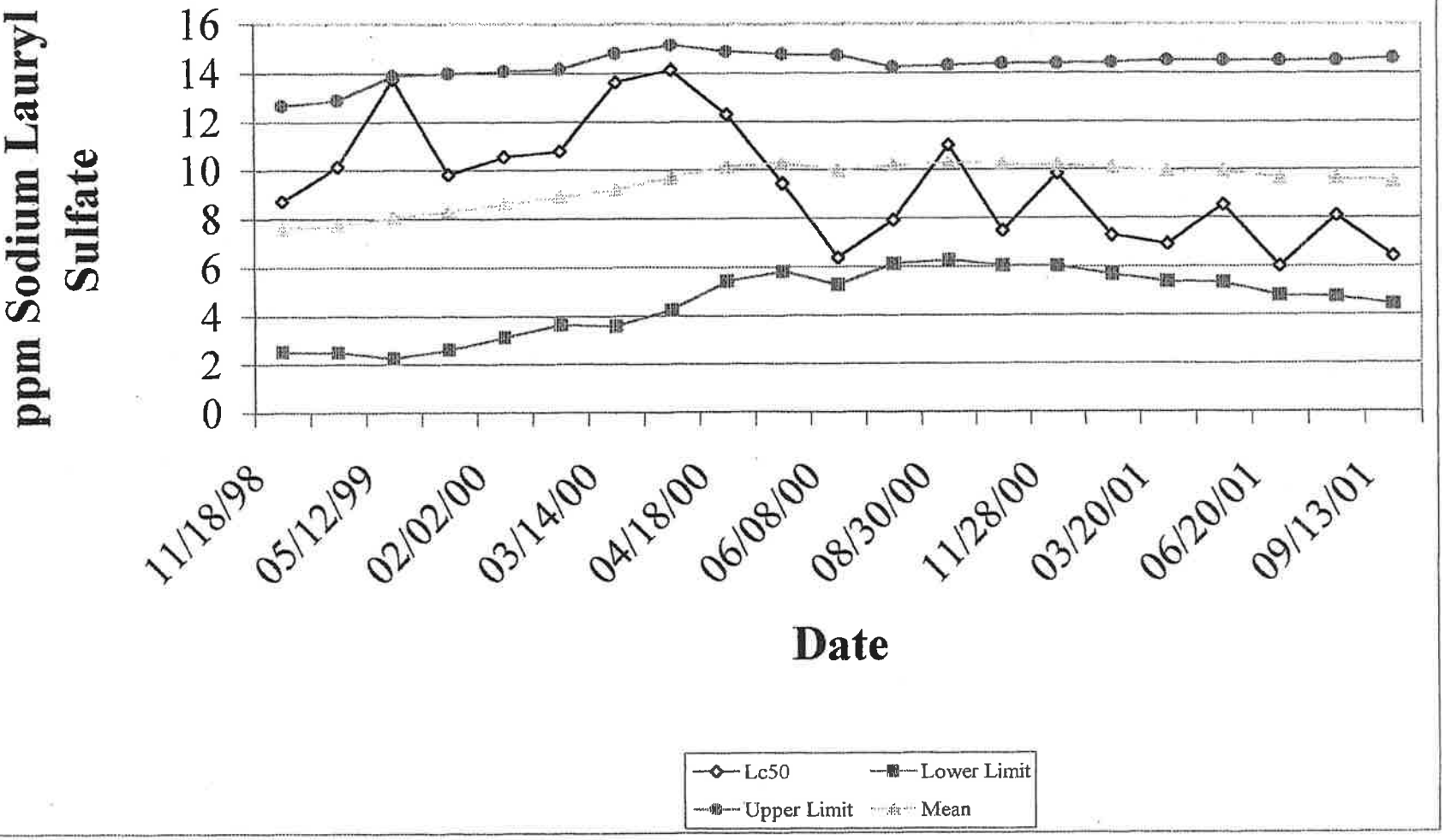
BMI Reference Toxicant Chart

Acute *Cypinodon variegatus*



BMI Reference Toxicant Chart

Acute *Mysidopsis bahia*



Omega Protein--Reedville
Sampling Results for **CYANIDE**

	Omega Effluent			Cockrell Creek water			
Date	Outfall 001 (future)	Outfall 004/005	Outfall 002	at Intake of 001	End of Mainstreet Reedville	Between Omega & Ampro	Type of Sample
10/18/01	<.01	<.01	<.01				water
11/15/01	0.042*						water
12/4/01	1.762*						water
5/9/02				0.02			water
8/12/02				<.01	<.01	<.01	water
8/13/02				0.1			SLUDGE
8/15/02	0.03						water
8/15/02	0.09						water
8/19/02					0.01	0.03	water
8/20/02	0.12						water
8/21/02	0.17		<.01				water
8/22/02	<.01						water
8/22/02	<.01		<.01				water
8/26/02					0.02	0.03	water
9/3/02					0.44	0.79	water
9/4/02	2.99						water
9/5/02	2.05						water
9/5/02	0.48						water
9/6/02	0.14						water
9/9/02					<.01	<.01	water
9/10/02	<.01						water
9/11/02	0.059						water
9/13/02	0.005						water
9/13/02	<.005						water
9/16/02					<.005	<.005	water
9/17/02	0.010						water
9/19/02	0.019						water
9/19/02	0.009						water
9/22/02					0.009	0.043	water
9/24/02	0.089						water
9/25/02	0.070						water
9/26/02	0.048						water
9/27/02	0.198						water
9/30/02					<.005	0.042	water
10/1/02	0.075						water
10/2/02	0.341						water
10/3/02	0.170						water

1) The Monday sampling of Creek media is performed in an effort to remove any influence of the discharge from Omega's processing. Omega usually completes processing for the week on Saturdays. Thus, by Monday, the Creek would have had two days to flush itself out by tidal action without any Omega discharges.

2) The sample taken on Tuesday September 3 was the day after Labor Day (Omega did not fish on Labor Day)--there likely was a lot of boat traffic on Cockrell Creek on Labor Day that might have agitated bottom sludges.

3) The sampling of 5/9/02 was before fishing had started for 2002

4) Data from the 001 and 004/005 samples taken in 2001 (indicated by an *) are questionable due to possible cross communication

5) Starting with the 9/13/02 sample, the Detection Limit was lowered to 0.005. According to the lab, it is not possible for lower Detection Limits.

TOXICITY TESTS
FOR
OMEGA PROTEIN

Submitted to:

Mr. Lyell Jett
Omega Protein
P.O. Box 175
Reedville, VA 22539

Prepared by:

Biological Monitoring, Inc.
1800 Kraft Drive, Suite 101
Blacksburg, VA 24060

Phone: 540-953-2821
Fax: 540-951-1481
www.biomon.com

November 27, 2001

The following data have been internally reviewed and the personnel meticulously followed the methods. The procedures are deemed to be compliant with the methods and acceptable for reporting.

Anthony Smith (Laboratory Manager)

BIOLOGICAL MONITORING, INC.
Toxicity Test Condition Summary

Client: Omega Protein

Prepared by: Anthony Smith

NPDES Permit #: VA0003867

Experiment ID#: OMP111401-2

Test Organism: Mysidopsis bahia

Test Type: Static Acute

Organism Age at Start of Test: 3 d

Sample Tested: Outfall 002

Sample Type: Composite

Sample Collection Frequency and Dates and Times: From 11/12/01 @ 0700 to 11/13/01 @ 0700

Sample Collector: J.R. Hall

Delivered by: UPS

Test Solution Renewal Frequency: N/A

Dilution Water Used: Synthetic Seawater 111301

Test Temperature: 25 ± 1°C

No. of Replicates per conc.: 4

No. of Organisms per Replicate: 5

Feeding prior to test: Normal

Feeding Regime: 2x daily

Chamber Size: 800 mL PP

Test Volume: 450 mL

Photo Period: 16h light/8h dark

Test Duration: 48 h

Start of Test: Date: 11/14/01

Time: 1620

End of Test: Date: 11/16/01

Time: 1532

Equipment:

pH Meter: SA 720 (A)
DO Meter: YSI 58 (b)
SCT Meter:YSI 33 (A)
°C Measurement: Calibrated Thermometer
Salinity: SCT Meter
Chlorine: Fisher/Porter Amperometric Titrator

Test Method Reference: U.S. EPA. 1993. Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms. EPA/600/4-90/027F.

BIOLOGICAL MONITORING, INC.
Acute Toxicity Test Data Summary

Client	Omega Protein	**NPDES PERMIT #:** VA0003867		
Test Organism	Mysidopsis bahia		**Date**	**Time**
Experiment ID	OMP111401-2	**Start Test**	11/14/01	1620
Sample Tested	Outfall 002	**End Test**	11/16/01	1532

RESULTS

Water Chemistry Analyses
(Range)

Conc. %	Temp. (°C)	D.O. (mg/L)	pH	Salinity (ppt)	Survival (%) 48 h
0	25	5.2-6.9	7.8-8.3	19-20	95
100	25	6.2-7.7	7.8-7.9	18	95

STATISTICAL ANALYSES

Test Method	LC50 (%)	95% Fiducial (Confidence) Limits
N/A	N/A	N/A

COMMENTS: No LC50 generated due to lack of mortality. NOAEC = 100%.

TOXICITY TEST DATA SHEET

Page ___ of ___

Experiment I.D. #: OMP111401-2 NPDES Permit #: VA0003867 Project Scientist: Benjamin A. Mackey

Client: Omega Protein QC Officer: NATE MARGASON

Effluent/Sample: OUTFALL 002 Test Organism; Species: M. bahia Org. Batch #: ABS111301

Sample Container: P.E. Number of Organisms per Concentration: 20 Age: 3d

Sample Type; Date and Time of Collection: Dilution Water Used: Syn. Seawater Batch #: 111301

Grab: Date: ___ Time: ___ Test Temperature: 25 ± 1°C

(Composite) From: Date: 111201 Time: 7:00 To: Date: 111301 Time: 7:00 Start of Test: Date: 111401 Time: 1620

Test Mode: Static Acute Test Duration: 48 hrs. End of Test: Date: 111601 Time: 1532

Conc or %	Test Conc #	Number of Live Organisms					Dissolved Oxygen (mg/L)					pH					Salinity 0/00					Temperature (°C)				
		0	24	48	72	96	0	24	48	72	96	0	24	48	72	96	0	24	48	72	96	0	24	48	72	96
0	A	5	4	4			6.9	6.0	5.2			8.3	8.1	7.8			~~250~~	~~250~~	~~260~~			25	25	25		
	B	5	5	5													19	19	20							
	C	5	5	5																						
	D	5	5	5																						
100	A	5	5	5			7.7	6.2	6.2			7.9	7.9	7.8			~~240~~	~~240~~	~~240~~			25	25	25		
	B	5	5	5													18	18	18							
	C	5	5	5																						
	D	5	5	4																						
Recorded By:		BM	BM	BM			BM	BM	BM			BM	BM	BM			BM	BM	BM			BM	BM	BM		

* mg/L as $CaCO_3$

BIOLOGICAL MONITORING, INC.

Toxicity Test Procedure Check Sheet

Page__of__

Test I.D.#: OMP111401-2 Permit # VA0003867 Test Containers Used: P.E # of replicates/concentration: 4

Specify below volume of diluent and effluent measured out per concentration in this test:

Concentration % mg/L other	Diluent(mLs)	Effluent(mLs)	Total(mLs)
0	3300	0	3300
100	0	3300	3300

Are all test chambers properly labeled? ✓

Specify vessel type and volume used to measure and deliver effluent and diluent to test chambers:

Graduated cylinder(s) 2000 ✓ 1000_____ 500_____ 250_____

100_____ 50_____ 25_____ 10_____

Volumetric flask(s) 1000_____ 500_____ 200_____ 100_____

Pipet(s) 10_____ 5_____ 1_____ Other_____

Specify material (s) used to place test organisms into test chambers: wide bore pipet

Total Chlorine of sample upon arrival (mg/L) <0.01 mg/L

Total Chlorine of sample after dechlorination (mg/L) N/D

Exposure Chamber
Total Vessel Capacity: 800 mL
Test Solution Volume: 450 mL
Water Depth Constant: ✓
Cyclic:_____

Feeding Schedule
Pretest Feeding:_____
Not fed:_____
Fed Daily: 2X
Fed irregularly (describe)_____
_____
Type of Food:_____

Aeration
Pretest:_____
None: ✓
Slow:_____(bubbles/min)
Moderate:_____
Vigorous:_____
Beginning:_____(hour)

Screened Animal Enclosures
Not Used: ✓
Used:_____

Photoperiod:
16h/8h: ✓
other:_____

Organism pretest treatment
Normal

Conditions of surviving organisms at end of test: Normal

Methods of Randomization employed: Random #'s

Comments:_____

10899

SAMPLE COLLECTION - CHAIN OF CUSTODY FORM

To be completed by the person collecting the sample. See reverse side for instructions.

1. Client name Omega Protein
2. Sampler's name J. R. Hall
3. Sample source Lagoon outfall
4. Outfall/station 002
5. Purchase order no. _____
6. Affiliation _____
7. NPDES permit no./County _____
8. Test period for which data is being submitted:

9. *Sample relinquished by:* J.R. Hall 11/13/01 *Date; Received by:* Benjamin A. Mehyo 111401 *Date;*

Sample relinquished by: _____ / _____ *Date; Received by:* _____ / _____ *Date.*

Description of Sampling Methods and Equipment

10. Type of sample collected:
   - Grab _____
   - Date collected _____
   - Time collected _____
   - Volume _____
   - Composite ✓
   - Composite type _____
   - Collection period: from 11-12-01 (date) 7:00 AM (time) to 11-13-01 (date) 7:00 AM (time)

11. Flow during sampling 30,300
12. Type of container 1-gal. plastic
13. Number of containers shipped 1
14. No. of subsamples _____
15. Frequency _____
16. Volume _____

Condition of Effluent at Time of Collection

17. pH 2.40
18. Chlorine _____
19. Temperature:
   - At collection point _____
   - In collection device (comp. sample must be @ or below 4°C) 4°C
20. Is the sample:
   - Chlorinated _____
   - Dechlorinated _____
   - Unknown _____
   - Dechlorination method _____

Shipping Information

21. Method of shipment UPS
22. Date shipped 11-13-01
23. Time 2:30 pm
24. Was the sample packed with ice for shipment? Yes
25. *Custody seal in place by* J.R. Hall *Date* 11-13-01 *Time* 1:00 pm

Instructions to Lab

26. Type of test(s) to be performed _____
27. Should BMI dechlorinate the sample (Yes or No) ____
28. Should ammonia be measured? (Yes or No) _____
29. Comments _____

30. I certify that the above information is correct J.R. Hall (Signature) 11-13-01 (Date)

****

For BMI Use Only

Alk _____
Hard _____
BMI Sample ID# OMP111401-1 *Received by* Benjamin A. Mehyo *Date* 111401 *Time* 1200
Upon arrival at BMI: Custody seal _____ Temperature 3.8°C pH 8.1 Chlorine 2.00 mg/L DO 11.6
On ice? ✓ Salinity 21 ppt Conductivity 18000
Visual description Clear Odorless Sample refrigerated ✓
Test ID number(s) OMP111401-1

11050

BMI **BIOLOGICAL MONITORING, INC.**
LABORATORY WORK ORDER

Project Manager: A. Santa

Date: 11/14/01

Assigned to: _____

Test Start Date: 11/14/01

Client: Omega Protein

Client's P.O.#: _____

Test ID#: OMP 111401-1

BMI Project#: 3201

Test Description: SAMh

Test Prefix: OMP

Test Conditions (Circle Approriate Choice)

(Acute)/Chronic

Organism: P.p., D.p., D.m., C.d., (M.b.), C.v., H.a.,Ct

Toxicant: 002

Other: _____

Permit No.#: _____

Duration: 24h, (48h) 96h, 7d, 10d, _____

Test Vol: 450 ml

Renew at: 24h, 48h, 96h, daily, none, _____

Chamber: 800 ml

Concentrations: [0, 6.25, 12.5, 25, 50, 100%]

IWC: _____

(Other: 0, 100)

Replicates: 1, 2, 3, (4), 8, 10

Other: _____

Diluent: MHRW, Surface, (Syn Seath)

Temperature: 12 ± 1° C, 20 ± 1°C, 23 ± 1°C, (25 ± 1°C)

Test Salinity: Freshwater, 13 ppt, (20 ppt)

Feeding: 1x daily, (2 x daily), 3 x daily, none, as specified _____

Dechlorination Sample: Yes/No (Circle One)

pH Adjustment to be done: Yes/No

Extra Controls: _____

Special Conditions: _____

Comments: Range finder as well

BIOLOGICAL MONITORING, INC.
Toxicity Test Condition Summary

Client: Omega Protein

Prepared by: Anthony Smith

NPDES Permit #: N/A

Experiment ID#: RT111401-1

Test Organism: Mysidopsis bahia

Test Type: Static Acute Reference Toxicant

Organism Age at Start of Test: 3 d

Sample Tested: Sodium Lauryl Sulfate

Sample Type: Product

Sample Preparation Dates and Times: 11/14/01 @ 1400

Sample Prepared by: B. Machingo

Delivered by: N/A

Test Solution Renewal Frequency: N/A

Dilution Water Used: Synthetic Seawater 111301

Test Temperature: 25 ± 1°C

No. of Replicates per conc.: 2

No. of Organisms per Replicate: 10

Feeding prior to test: Normal

Feeding Regime: 2x daily

Chamber Size: 800 mL PP

Test Volume: 450 mL

Photo Period: 16h light/8h dark

Test Duration: 48 h

Start of Test: Date: 11/14/01

Time: 1450

End of Test: Date: 11/16/01

Time: 1422

Equipment:

pH Meter: SA 720 (A)
DO Meter: YSI 58 (b)
SCT Meter:YSI 33 (A)
°C Measurement: Calibrated Thermometer
Salinity: SCT Meter
Chlorine: Fisher/Porter Amperometric Titrator

Test Method Reference: U.S. EPA. 1993. Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms. EPA/600/4-90/027F.

BIOLOGICAL MONITORING, INC.
Acute Toxicity Test Data Summary

Client	Omega Protein	**NPDES PERMIT #:** N/A		
Test Organism	Mysidopsis bahia		**Date**	**Time**
Experiment ID	RT111401-1	**Start Test**	11/14/01	1450
Sample Tested	Sodium Lauryl Sulfate	**End Test**	11/16/01	1422

RESULTS

Water Chemistry Analyses
(Range)

Conc. ppm	Temp. (°C)	D.O. (mg/L)	pH	Salinity (ppt)	Survival (%) 48 h
0	25	5.5-6.9	7.8-8.3	19	95
1.25	25	5.8-6.9	7.9-8.3	20	85
2.5	25	5.4-6.9	7.9-8.3	20	100
5	25	5.2-6.9	7.8-8.3	19-20	50
10	25	5.0-6.9	7.8-8.3	19-20	20
20	25	4.8-7.0	8.0-8.3	20	0

STATISTICAL ANALYSES

Test Method	LC50 (ppm)	95% Fiducial (Confidence) Limits
Trimmed Spearman-Karber	**5.432**	**4.306-6.852**
COMMENTS:		

TOXICITY TEST DATA SHEET

Page ___ of ___

Experiment I.D. #: RT 111401-1 NPDES Permit #: NA Project Scientist: Benjamin A. Mochizuki

Client: BMI QC Officer: NATE MARGASON

Effluent/Sample: OUTFALL 001 Test Organism; Species: M. bahia Org. Batch #

Sample Container: Glass/Pyrex Number of Organisms per Concentration: 20 Age: 3d

Sample Type; Date and Time of Collection: Composite Dilution Water Used: Syn-Sea Instant 111301 Batch #: 111301

Grab: Date: Time: Test Temperature: 25 ± 1°C

Composite: From: Date: Time: To: Date: Time: Start of Test: Date: 111401 Time: 1450

Test Mode: Static-Acute Test Duration: 48 hrs. End of Test: Date: 111601 Time: 1422

Conc w/ %	Tmt Conc	Number of Live Organisms					Dissolved Oxygen (mg/L)					pH					Salinity 0/00					Temperature (°C)				
		0	24	48	72	96	0	24	48	72	96	0	24	48	72	96	0	24	48	72	96	0	24	48	72	96
0	A	10	10	9			6.9	6.0	5.5			8.3	8.1	7.8			~~250~~ BM	~~250~~ BM	~~250~~ BM			25	25	25		
	B	10	10	10													19	19	19							
1.25	A	10	10	9			6.9	5.8	5.8			8.3	8.1	7.9			~~260~~ BM	~~260~~ BM	~~260~~ BM			25	25	25		
	B	10	8	8													20	20	20							
2.5	A	10	10	10			6.9	5.4	6.0			8.3	8.0	7.9			~~260~~ BM	~~260~~ BM	~~260~~ BM			25	25	25		
	B	10	10	10													20	20	20							
5.0	A	10	9	9			6.9	5.2	5.2			8.3	8.0	7.9			~~260~~ BM	~~260~~ BM	~~260~~ BM			25	25	25		
	B	10	4	1													20	20	19							
10	A	10	3	3			6.9	5.0	5.0			8.3	8.0	7.8			~~260~~ BM	~~260~~ BM	~~260~~ BM			25	25	25		
	B	10	1	1													~~20~~	20	19							
20	A	10	0	—			7.0	4.8	—			8.3	8.0	—			~~260~~ BM	~~260~~ BM	—			25	25	—		
	B	10	0	—													20	20								
Recorded By:		BM	BM	BM			BM	BM	BM			BM	BM	BM			BM	BM	BM			BM	BM	BM		

* mg/L as $CaCO_3$

BIOLOGICAL MONITORING, INC.

Toxicity Test Procedure Check Sheet

Page___of___

Test I.D.#: RT 111401-1 Permit # NA Test Containers Used: P.E. # of replicates/concentration: 2

Specify below volume of diluent and effluent measured out per concentration in this test:

Concentration % mg/L other	Diluent(mLs)	Effluent(mLs)	Total(mLs)
0	1000	0	1000
1.25	987.5	12.5	1000
2.5	975	25	1000
5.0	950	50	1000
10	900	100	1000
20	800	200	1000

Are all test chambers properly labeled? ✓

Specify vessel type and volume used to measure and deliver effluent and diluent to test chambers:

Graduated cylinder(s) 2000____ 1000 ✓ 500____ 250 ✓

100 ✓ 50____ 25 ✓ 10____

Volumetric flask(s) 1000____ 500____ 200____ 100____

Pipet(s) 10____ 5____ 1____ Other____

Specify material (s) used to place test organisms into test chambers: Wide Bore Pipet

Total Chlorine of sample upon arrival (mg/L) <0.01 mg/L

Total Chlorine of sample after dechlorination (mg/L) N/A

Exposure Chamber
Total Vessel Capacity: 800 mL
Test Solution Volume: 450 mL
Water Depth Constant: yes
Cyclic:____

Feeding Schedule
Pretest Feeding:____
Not fed:____
Fed Daily: 2X
Fed irregularly (describe)____
____
Type of Food:____

Aeration
Pretest:____
None: ✓
Slow:____(bubbles/min)
Moderate:____
Vigorous:____
Beginning:____(hour)

Screened Animal Enclosures
Not Used: ✓
Used:____

Photoperiod:
16h/8h: ✓
other:____

Organism pretest treatment
Normal

Conditions of surviving organisms at end of test: Normal

Methods of Randomization employed: Random II

Comments:____

C:\My Documents\Admin Asst\SOP Figures'98\Figure 31B – Tox Test Procedure

BIOLOGICAL MONITORING, INC.
SUMMARY OF TEST STOCK SOLUTION PREPARATION

Client: BMI Omega Protein

Test ID Nos. OMP111401-1

STOCK A - MASTER STOCK SOLUTION

ID #: OMP111401 - 3023
Compound Type: Sodium Lauryl Sulfate
Weight of Compound: .10020 g
Diluent Type: Synthetic Seawater
Volume of Diluent (units): 1000 ml
Final Concentration: 100 mg/L
Prepared By: Benjamin A. Mochnick
Date/Time: 111401 / 1400

Substock A - ID #
Volume of Stock A:
Diluent Type:
Volume of Diluent:
Final Concentration:
Prepared By:
Date/Time:

Substock A - ID #
Volume of Stock A:
Diluent Type:
Volume of Diluent:
Final Concentration:
Prepared By:
Date/Time:

Substock A - ID #
Volume of Stock A:
Diluent Type:
Volume of Diluent:
Final Concentration:
Prepared By:
Date/Time:

Substock A - ID #
Volume of Stock A:
Diluent Type:
Volume of Diluent:
Final Concentration:
Prepared By:
Date/Time:

CT-TOX: BINOMIAL, MOVING AVERAGE, PROBIT, AND SPEARMAN METHODS

SPEARMAN-KARBER

TRIM:	7.50%
LC50:	5.432
95% LOWER CONFIDENCE:	4.306
95% UPPER CONFIDENCE:	6.852

CONC. ~~ppb~~ ppm	NUMBER EXPOSED	NUMBER DEAD	PERCENT DEAD	BINOMIAL PROB.(%)
1.25	20.	3.	15.00	.1288D+00
2.50	20.	0.	.00	.9537D-04
5.00	20.	10.	50.00	.5881D+02
10.00	20.	16.	80.00	.5909D+00
20.00	20.	20.	100.00	.9537D-04

THE BINOMIAL TEST SHOWS THAT 2.50 AND 10.00 CAN BE USED AS STATISTICALLY SOUND CONSERVATIVE 95 PERCENT CONFIDENCE LIMITS SINCE THE ACTUAL CONFIDENCE LEVEL ASSOCIATED WITH THESE LIMITS IS 99.4090 PERCENT.
AN APPROXIMATE LC50 FOR THIS DATA SET IS 5.000

RESULTS USING MOVING AVERAGE

SPAN	G	LC50	95% CONFIDENCE LIMIT	
4	.086	5.77	4.40	7.79

****** RESULTS CALCULATED BY PROBIT METHOD

ITERATIONS	G	H	GOODNESS OF FIT
6	1.061	4.02	.01

SINCE THE PROBABILITY IS LESS THAN 0.05,
RESULTS CALCULATED USING THE PROBIT METHOD
PROBABLY SHOULD NOT BE USED.

SLOPE = 2.91
95% CONFIDENCE LIMITS: -.09 AND 5.91

LC50= 5.03
95% CONFIDENCE LIMITS: 0 AND + INFINITY

LC1 = .80
95% CONFIDENCE LIMITS: 0 AND 2.41

DATE: 11/14/01 TEST NUMBER: RT-1 DURATION: 48 hours
SAMPLE: SLS SPECIES: M. bahia

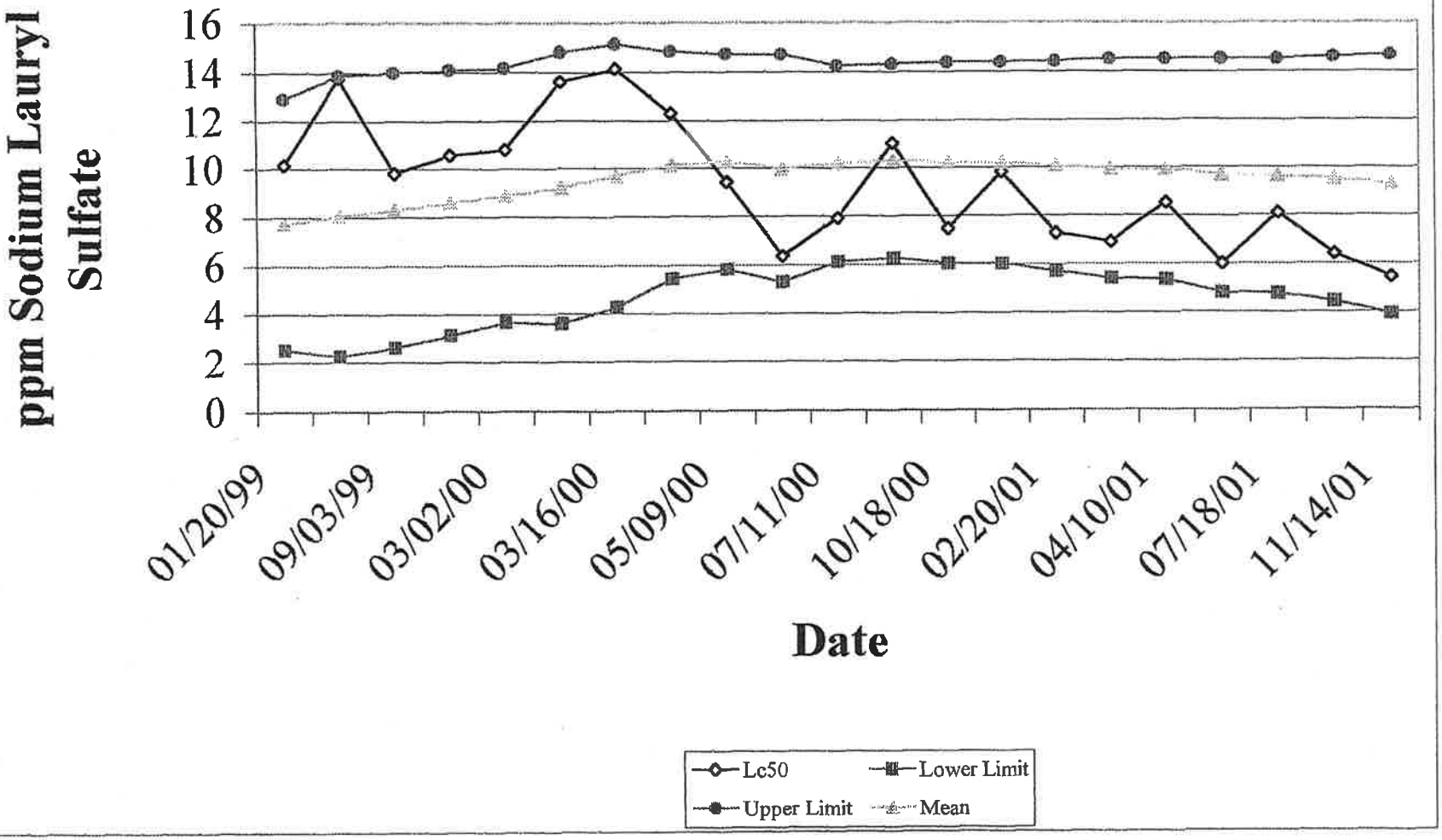
METHOD	LC50	CONFIDENCE LIMITS LOWER	UPPER	SPAN
BINOMIAL	5.000	2.500	10.000	7.500
MAA	5.773	4.397	7.788	3.391
PROBIT	5.032	*******	*******	*******
SPEARMAN	5.432	4.306	6.852	2.546

NOTE: MORTALITY PROPORTIONS WERE NOT MONOTONICALLY INCREASING.
ADJUSTMENTS WERE MADE PRIOR TO SPEARMAN-KARBER ESTIMATION.

**** = LIMIT DOES NOT EXIST

BMI Reference Toxicant Chart

Acute *Mysidopsis bahia*



OMEGA PROTEIN

Graham Lyell Jett
General Manager

January 18, 2002

Ms. Denise Mosca
Department of Environmental Quality
P.O. Box 669
429 East Church Street
Kilmarnock, VA 22482

Re: Final Quarterly Status Report

Dear Denise:

Based upon test results, we expect outfall compliance for Outfall 006 (a combination of prior outfalls 001, 004 and 005) to be resolved by separating outfall 006 into two new outfalls. Since the VPDES permit renewal application was due in June 2002, it was decided to submit the application sufficiently early to provide for a new permit for the start of the 2002 fishing season in late May. The new permit will address the new outfalls 001 and 006 and provide for a diffuser for Outfall 001. Thus, we expect to be in full compliance.

Sincerely yours,

Lyell Jett

Lyell Jett
General Manager

GLJ:sdh

P.O. Box 175, Reedville, Virginia 22539, Telephone 804-453-4211, Fax 804-453-4475

DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER QUALITY MONITORING
ATTACHMENT D

FACILITY NAME: Omega Protein
ADDRESS: P.O. Box 125, Reedville, Va. 22539

PERMIT NO.: VA0003867 OUTFALL NO.: EC2

DEQ PARAM #	EPA PARAM #	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMPLE FREQUENCY[3]	SPECIFIC TARGET VALUE[4] ug/l
METALS								
		Antimony (Dis.)	(5)	(5)	BDL	G	1/5 YR	129000 all outfalls
		Arsenic III (Dis.)	(5)	(5)	BDL	G	1/5 YR	[001,003, 004,005, 006: 55.2] [002: 634.8]
440	01025	Cadmium (Dis.)	(5)	(5)	BDL	G	1/5 YR	[001,003, 004,005, 006: 34.4] [002: 279]
023	01032	Chromium VI	(5)	(5)	BDL	G	1/5 YR	[001,003, 004,005, 006: 880] [002: 1500]
442	01040	Copper (Dis.)	(5)	(5)	.CCX mg/L	G	1/5 YR	[001,003, 004,005, 006: 2.32] [002: 26.68]
405	01049	Lead (Dis.)	(5)	(5)	BDL	G	1/5 YR	[001,003, 004,005, 006: 176] [002: 255]
444	71890	Mercury (Dis.)	(5)	(5)	BDL	G	1/5 YR	[001,002 004,005, 006: 1.0] [003: 1.68]
445	01065	Nickel (Dis.)	(5)	(5)	BDL	G	1/5 YR	[001,003, 004,005, 006: 60] [002: 249]
446	01145	Selenium (Dis.)	(5)	(5)	BDL	G	1/5 YR	[001,003, 004,005, 006: 240] [002: 2130]
447	01075	Silver (Dis.)	(5)	(5)	BDL	G	1/5 YR	[001,003, 004,005, 006: 1.84] [002: 21.16]
448	01092	Zinc (Dis.)	(5)	(5)	BDL	G	1/5 YR	[001,003, 004,005, 006: 76] [002: 874]

Antimony (Dis.) .008 mg/L

DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER QUALITY MONITORING
ATTACHMENT D

FACILITY NAME: Omega Protein
ADDRESS: P.O. Box 125, Reedville, Va. 22539

PERMIT NO.: VA0003867 OUTFALL NO.: 002

DEQ PARAM #	EPA PARAM #	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMPLE FREQUENCY[3]	SPECIFIC TARGET VALUE[4] ug/l
PESTICIDES/PCB'S								
332	39330	Aldrin	608	0.05	BDL	3G	1/5 YR	NA
333	39350	Chlordane	608	0.2	BDL	3G	1/5 YR	NA
334	77969	Chlorpyrifos (Dursban)	622	(7)	BDL	3G	1/5 YR	NA
		DDD	608	0.1	BDL	3G	1/5 YR	NA
		DDE	608	0.1	BDL	3G	1/5 YR	NA
335	39370	DDT	608	0.1	BDL	3G	1/5 YR	NA
336	39560	Demeton	(6)	(7)	BDL	3G	1/5 YR	NA
337	39380	Dieldrin	608	0.1	BDL	3G	1/5 YR	NA
		Endosulfan	608	0.1	BDL	3G	1/5 YR	NA
339	39390	Endrin	608	0.1	BDL	3G	1/5 YR	NA
340	39580	Guthion	622	(7)		3G	1/5 YR	NA
341	39410	Heptachlor	608	0.05	BDL	3G	1/5 YR	NA
342	77835	Hexachlorocyclohexane (Lindane)	608	0.05		3G	1/5 YR	NA
		Kepone	(6)	(7)	BDL	3G	1/5 YR	NA
343	39530	Malathion	(6)	(7)	BDL	3G	1/5 YR	NA
344	39480	Methoxychlor	(6)	(7)	BDL	3G	1/5 YR	NA
345	39755	Mirex	(6)	(7)	BDL	3G	1/5 YR	NA
641		PCB-1242	608	1.0	BDL	3G	1/5 YR	NA
642		PCB-1254	608	1.0	BDL	3G	1/5 YR	NA
643		PCB-1221	608	1.0	BDL	3G	1/5 YR	NA
644		PCB-1232	608	1.0	BDL	3G	1/5 YR	NA
645		PCB-1248	608	1.0	BDL	3G	1/5 YR	NA
618	39508	PCB-1260	608	1.0	BDL	3G	1/5 YR	NA
646		PCB-1016	608	1.0	BDL	3G	1/5 YR	NA

DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER QUALITY MONITORING
ATTACHMENT D

FACILITY NAME: Omega Protein
ADDRESS: P.O. Box 125, Reedville, Va. 22539

PERMIT NO.: VA0003867 OUTFALL NO.: 002

DEQ PARAM #	EPA PARAM #	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMPLE FREQUENCY[3]	SPECIFIC TARGET VALUE[4] ug/l
349	39400	Toxaphene	608	5.0	BDL	3G	1/5 YR	NA
647		2-(2,4,5-Trichlorophenoxy) propionic acid (Silvex)	(6)	(7)	BDL	3G	1/5 YR (PWS)	NA
BASE NEUTRAL EXTRACTABLES								
		Acenaphthene	625	10.0	BDL	3G	1/5 YR	NA
275	34222	Anthracene	625	10.0	BDL	3G	1/5 YR	NA
276	34526	Benzo(a)anthracene	625	10.0	BDL	3G	1/5 YR	NA
648		Benzo(b)fluoranthene	625	10.0	BDL	3G	1/5 YR	NA
278	34242	Benzo(k)fluoranthene	625	10.0	BDL	3G	1/5 YR	NA
277	34247	Benzo(a)pyrene	625	10.0	BDL	3G	1/5 YR	NA
		Butyl benzyl phthalate	625	10.0	BDL	3G	1/5 YR	NA
282	34320	Chrysene	625	10.0	BDL	3G	1/5 YR	NA
654		Dibenz(a,h)anthracene	625	20.0	BDL	3G	1/5 YR	NA
		Dibutyl phthalate	625	10.0		3G	1/5 YR	NA
259	34536	1,2-Dichlorobenzene	625	10.0	BDL	3G	1/5 YR	NA
264	34566	1,3-Dichlorobenzene	625	10.0	BDL	3G	1/5 YR	NA
266	34571	1,4-Dichlorobenzene	625	10.0	BDL	3G	1/5 YR	NA
		Diethyl phthalate	625	10.0	BDL	3G	1/5 YR	NA
170		Di-2-Ethylhexyl Phthalate	625	10.0		3G	1/5 YR	NA
239	34611	2,4-Dinitrotoluene	625	10.0	BDL	3G	1/5 YR	NA
287	34376	Fluoranthene	625	10.0	BDL	3G	1/5 YR	NA
288	34381	Fluorene	625	10.0	BDL	3G	1/5 YR	NA
651		Indeno(1,2,3-cd)pyrene	625	20.0	BDL	3G	1/5 YR	NA
650		Isophorone	625	10.0	BDL	3G	1/5 YR	NA
293	34696	Naphthalene	625	10.0	BDL	3G	1/5 YR	NA
296	34469	Pyrene	625	10.0	BDL	3G	1/5 YR	NA
		1,2,4-Trichlorobenzene	625	10.0	BDL	3G	1/5 YR	NA

DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER QUALITY MONITORING
ATTACHMENT D

FACILITY NAME: Omega Protein
ADDRESS: P.O. Box 125, Reedville, Va. 22539

PERMIT NO.: VA0003867 OUTFALL NO.: 002

DEQ PARAM #	EPA PARAM #	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMPLE FREQUENCY[3]	SPECIFIC TARGET VALUE[4] ug/l
VOLATILES								
216	34030	Benzene	624	10.0	BDL	G	1/5 YR	NA
484	32104	Bromoform	624	10.0	BDL	G	1/5 YR	NA
236	32102	Carbon Tetrachloride	624	10.0	BDL	G	1/5 YR	NA
652		Chlorodibromomethane	624	10.0		G	1/5 YR	NA
223	32106	Chloroform	624	10.0	BDL	G	1/5 YR	NA
649		Dichloromethane	624	20.0		G	1/5 YR	NA
244	79603	Dichlorobromomethane	624	20.0		G	1/5 YR	NA
260	34531	1,2-Dichloroethane	624	10.0	BDL	G	1/5 YR	NA
		1,1-Dichloroethylene	624	10.0		G	1/5 YR	NA
172	34371	Ethylbenzene	624	10.0	BDL	G	1/5 YR	NA
653		Monochlorobenzene	624	50.0		G	1/5 YR	NA
220	34475	Tetrachloroethylene	624	10.0		G	1/5 YR	NA
222	34010	Toluene	624	10.0	BDL	G	1/5 YR	NA
155	39180	Trichloroethylene	624	10.0		G	1/5 YR	NA
173	39175	Vinyl Chloride	624	10.0	BDL	G	1/5 YR	NA
ACIDS EXTRACTABLES								
		2-Chlorophenol	625	10.0	BDL	3G	1/5 YR	NA
		2,4 Dichlorophenol	625	10.0	BDL	3G	1/5 YR	NA
		2,4 Dimethylphenol	625	10.0	BDL	3G	1/5 YR	NA
210	39032	Pentachlorophenol	625	50.0		3G	1/5 YR	NA
175	46000	Phenol[8]	625	10.0		3G	1/5 YR	NA
602	34621	2,4,6-Trichlorophenol	625	10.0		3G	1/5 YR	NA
MISCELLANEOUS								
039	00610	Ammonia as NH3-N	350.1	200	48.3 mg/L	C	1/5 YR	NA
005	50060	Chlorine, Total Residual	(6)	100		G	1/5 YR	NA
018	00720	Cyanide	335.2	10.0		G	1/5 YR	NA

DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER QUALITY MONITORING
ATTACHMENT D

FACILITY NAME: Omega Protein
ADDRESS: P.O. Box 125, Reedville, Va. 22539

PERMIT NO.: VA0003867 OUTFALL NO.: 002

DEQ PARAM #	EPA PARAM #	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMPLE FREQUENCY[3]	SPECIFIC TARGET VALUE[4] ug/l
		Fecal Coliform N/CML)	(6)	(7)	See Permit	G	1/5 YR	NA
137	00900	Hardness (as mg/l $CaCO_3$)	(6)	(7)	10 mg/L	C	1/5 YR	NA
		Hydrogen Sulfide	(6)	(7)	BDL	G	1/5 YR	NA
		Nitrate (as mg/l N)	(6)	(7)	19.1 mg/L	C	1/5 YR	NA
350	30340	Tributlytin[9]	NSB 85-3295	(7)	BDL	C	1/5 YR if believed present by permittee	NA
252	81551	Xylenes (total)	SW 846 Method 8020	(7)	BDL	G	1/5 YR	NA

Graham Lyell Jett / General Manager
Name of Principal Exec. Officer or Authorized Agent / Title

Graham Lyell Jett / 2/5/02.
Signature of Principal Officer or Authorized Agent / Date

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations. See 18 U.S.C. §1001 and 33 U.S.C. §1319. (Penalties under these statutes may include fines up to $10,000 and or maximum imprisonment of between 6 months and 5 years.)

DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER QUALITY MONITORING
ATTACHMENT D

FACILITY NAME: Omega Protein
ADDRESS: P.O. Box 125, Reedville, Va. 22539

PERMIT NO.: VA0003867 OUTFALL NO.: CC6

DEQ PARAM #	EPA PARAM #	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMPLE FREQUENCY[3]	SPECIFIC TARGET VALUE[4] ug/l
METALS								
		Antimony (Dis.)	(5)	(5)	BDL	G	1/5 YR	129000 all outfalls
		Arsenic III (Dis.)	(5)	(5)	BDL	G	1/5 YR	[001,003, 004,005, 006: 55.2] [002: 634.8]
440	01025	Cadmium (Dis.)	(5)	(5)	BDL	G	1/5 YR	[001,003, 004,005, 006: 34.4] [002: 279]
023	01032	Chromium VI	(5)	(5)	BDL	G	1/5 YR	[001,003, 004,005, 006: 880] [002: 1500]
442	01040	Copper (Dis.)	(5)	(5)	.117 mg/L	G	1/5 YR	[001,003, 004,005, 006: 2.32] [002: 26.68]
405	01049	Lead (Dis.)	(5)	(5)	BDL	G	1/5 YR	[001,003, 004,005, 006: 176] [002: 255]
444	71890	Mercury (Dis.)	(5)	(5)	BDL	G	1/5 YR	[001,002 004,005, 006: 1.0] [003: 1.68]
445	01065	Nickel (Dis.)	(5)	(5)	.014 mg/L	G	1/5 YR	[001,003, 004,005, 006: 60] [002: 249]
446	01145	Selenium (Dis.)	(5)	(5)	.3DL	G	1/5 YR	[001,003, 004,005, 006: 240] [002: 2130]
447	01075	Silver (Dis.)	(5)	(5)	.024 mg/L	G	1/5 YR	[001,003, 004,005, 006: 1.84] [002: 21.16]
448	01092	Zinc (Dis.)	(5)	(5)	BDL	G	1/5 YR	[001,003, 004,005, 006: 76] [002: 874]

DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER QUALITY MONITORING
ATTACHMENT D

FACILITY NAME: Omega Protein
ADDRESS: P.O. Box 125, Reedville, Va. 22539

PERMIT NO.: VA0003867 OUTFALL NO.: 006

DEQ PARAM #	EPA PARAM #	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMPLE FREQUENCY[3]	SPECIFIC TARGET VALUE[4] ug/l
PESTICIDES/PCB'S								
332	39330	Aldrin	608	0.05	BDL	3G	1/5 YR	NA
333	39350	Chlordane	608	0.2	BDL	3G	1/5 YR	NA
334	77969	Chlorpyrifos (Dursban)	622	(7)	BDL	3G	1/5 YR	NA
		DDD	608	0.1	BDL	3G	1/5 YR	NA
		DDE	608	0.1	BDL	3G	1/5 YR	NA
335	39370	DDT	608	0.1	BDL	3G	1/5 YR	NA
336	39560	Demeton	(6)	(7)	BDL	3G	1/5 YR	NA
337	39380	Dieldrin	608	0.1	BDL	3G	1/5 YR	NA
		Endosulfan	608	0.1	BDL	3G	1/5 YR	NA
339	39390	Endrin	608	0.1	BDL	3G	1/5 YR	NA
340	39580	Guthion	622	(7)		3G	1/5 YR	NA
341	39410	Heptachlor	608	0.05	BDL	3G	1/5 YR	NA
342	77835	Hexachlorocyclohexane (Lindane)	608	0.05		3G	1/5 YR	NA
		Kepone	(6)	(7)	BDL	3G	1/5 YR	NA
343	39530	Malathion	(6)	(7)	BDL	3G	1/5 YR	NA
344	39480	Methoxychlor	(6)	(7)	BDL	3G	1/5 YR	NA
345	39755	Mirex	(6)	(7)	BDL	3G	1/5 YR	NA
641		PCB-1242	608	1.0	BDL	3G	1/5 YR	NA
642		PCB-1254	608	1.0	BDL	3G	1/5 YR	NA
643		PCB-1221	608	1.0	BDL	3G	1/5 YR	NA
644		PCB-1232	608	1.0	BDL	3G	1/5 YR	NA
645		PCB-1248	608	1.0	BDL	3G	1/5 YR	NA
618	39508	PCB-1260	608	1.0	BDL	3G	1/5 YR	NA
646		PCB-1016	608	1.0	BDL	3G	1/5 YR	NA

DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER QUALITY MONITORING
ATTACHMENT D

FACILITY NAME: Omega Protein
ADDRESS: P.O. Box 125, Reedville, Va. 22539

PERMIT NO.: VA0003867 OUTFALL NO.: EC6

DEQ PARAM #	EPA PARAM #	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMPLE FREQUENCY[3]	SPECIFIC TARGET VALUE[4] ug/l
349	39400	Toxaphene	608	5.0	BDL	3G	1/5 YR	NA
647		2-(2,4,5-Trichlorophenoxy) propionic acid (Silvex)	(6)	(7)	BDL	3G	1/5 YR (PWS)	NA
BASE NEUTRAL EXTRACTABLES								
		Acenaphthene	625	10.0	BDL	3G	1/5 YR	NA
275	34222	Anthracene	625	10.0	BDL	3G	1/5 YR	NA
276	34526	Benzo(a)anthracene	625	10.0	BDL	3G	1/5 YR	NA
648		Benzo(b)fluoranthene	625	10.0	BDL	3G	1/5 YR	NA
278	34242	Benzo(k)fluoranthene	625	10.0	BDL	3G	1/5 YR	NA
277	34247	Benzo(a)pyrene	625	10.0	BDL	3G	1/5 YR	NA
		Butyl benzyl phthalate	625	10.0	BDL	3G	1/5 YR	NA
282	34320	Chrysene	625	10.0	BDL	3G	1/5 YR	NA
654		Dibenz(a,h)anthracene	625	20.0	BDL	3G	1/5 YR	NA
		Dibutyl phthalate	625	10.0		3G	1/5 YR	NA
259	34536	1,2-Dichlorobenzene	625	10.0	BDL	3G	1/5 YR	NA
264	34566	1,3-Dichlorobenzene	625	10.0	BDL	3G	1/5 YR	NA
266	34571	1,4-Dichlorobenzene	625	10.0	BDL	3G	1/5 YR	NA
		Diethyl phthalate	625	10.0	BDL	3G	1/5 YR	NA
170		Di-2-Ethylhexyl Phthalate	625	10.0		3G	1/5 YR	NA
239	34611	2,4-Dinitrotoluene	625	10.0	BDL	3G	1/5 YR	NA
287	34376	Fluoranthene	625	10.0	BDL	3G	1/5 YR	NA
288	34381	Fluorene	625	10.0	BDL	3G	1/5 YR	NA
651		Indeno(1,2,3-cd)pyrene	625	20.0	BDL	3G	1/5 YR	NA
650		Isophorone	625	10.0	BDL	3G	1/5 YR	NA
293	34696	Naphthalene	625	10.0	BDL	3G	1/5 YR	NA
296	34469	Pyrene	625	10.0	BDL	3G	1/5 YR	NA
		1,2,4-Trichlorobenzene	625	10.0	BDL	3G	1/5 YR	NA

DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER QUALITY MONITORING
ATTACHMENT D

FACILITY NAME: Omega Protein
ADDRESS: P.O. Box 125, Reedville, Va. 22539

PERMIT NO.: VA0003867 OUTFALL NO.: 006

DEQ PARAM #	EPA PARAM #	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMPLE FREQUENCY[3]	SPECIFIC TARGET VALUE[4] ug/l
VOLATILES								
216	34030	Benzene	624	10.0	BDL	G	1/5 YR	NA
484	32104	Bromoform	624	10.0	BDL	G	1/5 YR	NA
236	32102	Carbon Tetrachloride	624	10.0	BDL	G	1/5 YR	NA
652		Chlorodibromomethane	624	10.0		G	1/5 YR	NA
223	32106	Chloroform	624	10.0	BDL	G	1/5 YR	NA
649		Dichloromethane	624	20.0		G	1/5 YR	NA
244	79603	Dichlorobromomethane	624	20.0		G	1/5 YR	NA
260	34531	1,2-Dichloroethane	624	10.0	BDL	G	1/5 YR	NA
		1,1-Dichloroethylene	624	10.0		G	1/5 YR	NA
172	34371	Ethylbenzene	624	10.0	BDL	G	1/5 YR	NA
653		Monochlorobenzene	624	50.0		G	1/5 YR	NA
220	34475	Tetrachloroethylene	624	10.0		G	1/5 YR	NA
222	34010	Toluene	624	10.0	BDL	G	1/5 YR	NA
155	39180	Trichloroethylene	624	10.0		G	1/5 YR	NA
173	39175	Vinyl Chloride	624	10.0	BDL	G	1/5 YR	NA
ACIDS EXTRACTABLES								
		2-Chlorophenol	625	10.0	BDL	3G	1/5 YR	NA
		2,4 Dichlorophenol	625	10.0	BDL	3G	1/5 YR	NA
		2,4 Dimethylphenol	625	10.0	BDL	3G	1/5 YR	NA
210	39032	Pentachlorophenol	625	50.0	BDL	3G	1/5 YR	NA
175	46000	Phenol[8]	625	10.0	BDL	3G	1/5 YR	NA
602	34621	2,4,6-Trichlorophenol	625	10.0	BDL	3G	1/5 YR	NA
MISCELLANEOUS								
039	00610	Ammonia as NH3-N	350.1	200	3.7 mg/l	C	1/5 YR	NA
005	50060	Chlorine, Total Residual	(6)	100	BDL	G	1/5 YR	NA
018	00720	Cyanide	335.2	10.0	BDL	G	1/5 YR	NA

DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER QUALITY MONITORING
ATTACHMENT D

FACILITY NAME: Omega Protein
ADDRESS: P.O. Box 125, Reedville, Va. 22539

PERMIT NO.: VA0003867 OUTFALL NO.: 001

DEQ PARAM #	EPA PARAM #	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMPLE FREQUENCY[3]	SPECIFIC TARGET VALUE[4] ug/l
		Fecal Coliform N/CML)	(6)	(7)	240 MPN/100 mls	G	1/5 YR	NA
137	00900	Hardness (as mg/l $CaCO_3$)	(6)	(7)	5000 mg/l	C	1/5 YR	NA
		Hydrogen Sulfide	(6)	(7)	3.3 mg/l	G	1/5 YR	NA
		Nitrate (as mg/l N)	(6)	(7)	BDL	C	1/5 YR	NA
350	30340	Tributlytin[9]	NSB 85-3295	(7)	BDL	C	1/5 YR if believed present by permittee	NA
252	81551	Xylenes (total)	SW 846 Method 8020	(7)	BDL	G	1/5 YR	NA

Graham Lyell Jett / General Manager
Name of Principal Exec. Officer or Authorized Agent / Title

Graham Lyell Jett / 2/5/02
Signature of Principal Officer or Authorized Agent / Date

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations. See 18 U.S.C. §1001 and 33 U.S.C. §1319. (Penalties under these statutes may include fines up to $10,000 and or maximum imprisonment of between 6 months and 5 years.)

DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER QUALITY MONITORING
ATTACHMENT D

FACILITY NAME: Omega Protein
ADDRESS: P.O. Box 125, Reedville, Va. 22539

PERMIT NO.: VA0003867 OUTFALL NO.: OC-1

DEQ PARAM #	EPA PARAM #	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMPLE FREQUENCY[3]	SPECIFIC TARGET VALUE[4] ug/l
METALS								
		Antimony (Dis.)	(5)	(5)	BDL	G	1/5 YR	129000 all outfalls
		Arsenic III (Dis.)	(5)	(5)	BDL	G	1/5 YR	[001,003, 004,005, 006: 55.2] [002: 634.8]
440	01025	Cadmium (Dis.)	(5)	(5)	.008 mg/L	G	1/5 YR	[001,003, 004,005, 006: 34.4] [002: 279]
023	01032	Chromium VI	(5)	(5)	BDL	G	1/5 YR	[001,003, 004,005, 006: 880] [002: 1500]
442	01040	Copper (Dis.)	(5)	(5)	.088 mg/L	G	1/5 YR	[001,003, 004,005, 006: 2.32] [002: 26.68]
405	01049	Lead (Dis.)	(5)	(5)	BDL	G	1/5 YR	[001,003, 004,005, 006: 176] [002: 255]
444	71890	Mercury (Dis.)	(5)	(5)	BDL	G	1/5 YR	[001,002 004,005, 006: 1.0] [003: 1.68]
445	01065	Nickel (Dis.)	(5)	(5)	BDL	G	1/5 YR	[001,003, 004,005, 006: 60] [002: 249]
446	01145	Selenium (Dis.)	(5)	(5)	BDL	G	1/5 YR	[001,003, 004,005, 006: 240] [002: 2130]
447	01075	Silver (Dis.)	(5)	(5)	.027 mg/L	G	1/5 YR	[001,003, 004,005, 006: 1.84] [002: 21.16]
448	01092	Zinc (Dis.)	(5)	(5)	BDL	G	1/5 YR	[001,003, 004,005, 006: 76] [002: 874]

DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER QUALITY MONITORING
ATTACHMENT D

FACILITY NAME: Omega Protein
ADDRESS: P.O. Box 125, Reedville, Va. 22539

PERMIT NO.: VA0003867 OUTFALL NO.: 001

DEQ PARAM #	EPA PARAM #	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMPLE FREQUENCY[3]	SPECIFIC TARGET VALUE[4] ug/l
PESTICIDES/PCB'S								
332	39330	Aldrin	608	0.05	BDL	3G	1/5 YR	NA
333	39350	Chlordane	608	0.2	BDL	3G	1/5 YR	NA
334	77969	Chlorpyrifos (Dursban)	622	(7)	BDL	3G	1/5 YR	NA
		DDD	608	0.1	BDL	3G	1/5 YR	NA
		DDE	608	0.1	BDL	3G	1/5 YR	NA
335	39370	DDT	608	0.1	BDL	3G	1/5 YR	NA
336	39560	Demeton	(6)	(7)	BDL	3G	1/5 YR	NA
337	39380	Dieldrin	608	0.1	BDL	3G	1/5 YR	NA
		Endosulfan	608	0.1	BDL	3G	1/5 YR	NA
339	39390	Endrin	608	0.1	BDL	3G	1/5 YR	NA
340	39580	Guthion	622	(7)		3G	1/5 YR	NA
341	39410	Heptachlor	608	0.05	BDL	3G	1/5 YR	NA
342	77835	Hexachlorocyclohexane (Lindane)	608	0.05		3G	1/5 YR	NA
		Kepone	(6)	(7)	BDL	3G	1/5 YR	NA
343	39530	Malathion	(6)	(7)	BDL	3G	1/5 YR	NA
344	39480	Methoxychlor	(6)	(7)	BDL	3G	1/5 YR	NA
345	39755	Mirex	(6)	(7)	BDL	3G	1/5 YR	NA
641		PCB-1242	608	1.0	BDL	3G	1/5 YR	NA
642		PCB-1254	608	1.0	BDL	3G	1/5 YR	NA
643		PCB-1221	608	1.0	BDL	3G	1/5 YR	NA
644		PCB-1232	608	1.0	BDL	3G	1/5 YR	NA
645		PCB-1248	608	1.0	BDL	3G	1/5 YR	NA
618	39508	PCB-1260	608	1.0	BDL	3G	1/5 YR	NA
646		PCB-1016	608	1.0	BDL	3G	1/5 YR	NA

DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER QUALITY MONITORING
ATTACHMENT D

FACILITY NAME: Omega Protein
ADDRESS: P.O. Box 125, Reedville, Va. 22539

PERMIT NO.: VA0003867 OUTFALL NO.: 001

DEQ PARAM #	EPA PARAM #	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMPLE FREQUENCY[3]	SPECIFIC TARGET VALUE[4] ug/l
349	39400	Toxaphene	608	5.0	BDL	3G	1/5 YR	NA
647		2-(2,4,5-Trichlorophenoxy) propionic acid (Silvex)	(6)	(7)	BDL	3G	1/5 YR (PWS)	NA
BASE NEUTRAL EXTRACTABLES								
		Acenaphthene	625	10.0	BDL	3G	1/5 YR	NA
275	34222	Anthracene	625	10.0	BDL	3G	1/5 YR	NA
276	34526	Benzo(a)anthracene	625	10.0	BDL	3G	1/5 YR	NA
648		Benzo(b)fluoranthene	625	10.0	BDL	3G	1/5 YR	NA
278	34242	Benzo(k)fluoranthene	625	10.0	BDL	3G	1/5 YR	NA
277	34247	Benzo(a)pyrene	625	10.0	BDL	3G	1/5 YR	NA
		Butyl benzyl phthalate	625	10.0	BDL	3G	1/5 YR	NA
282	34320	Chrysene	625	10.0	BDL	3G	1/5 YR	NA
654		Dibenz(a,h)anthracene	625	20.0	BDL	3G	1/5 YR	NA
		Dibutyl phthalate	625	10.0		3G	1/5 YR	NA
259	34536	1,2-Dichlorobenzene	625	10.0	BDL	3G	1/5 YR	NA
264	34566	1,3-Dichlorobenzene	625	10.0	BDL	3G	1/5 YR	NA
266	34571	1,4-Dichlorobenzene	625	10.0	BDL	3G	1/5 YR	NA
		Diethyl phthalate	625	10.0	BDL	3G	1/5 YR	NA
170		Di-2-Ethylhexyl Phthalate	625	10.0		3G	1/5 YR	NA
239	34611	2,4-Dinitrotoluene	625	10.0	BDL	3G	1/5 YR	NA
287	34376	Fluoranthene	625	10.0	BDL	3G	1/5 YR	NA
288	34381	Fluorene	625	10.0	BDL	3G	1/5 YR	NA
651		Indeno(1,2,3-cd)pyrene	625	20.0	BDL	3G	1/5 YR	NA
650		Isophorone	625	10.0	BDL	3G	1/5 YR	NA
293	34696	Naphthalene	625	10.0	BDL	3G	1/5 YR	NA
296	34469	Pyrene	625	10.0	BDL	3G	1/5 YR	NA
		1,2,4-Trichlorobenzene	625	10.0	BDL	3G	1/5 YR	NA

DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER QUALITY MONITORING
ATTACHMENT D

FACILITY NAME: Omega Protein
ADDRESS: P.O. Box 125, Reedville, Va. 22539

PERMIT NO.: VA0003867 OUTFALL NO.: 001

DEQ PARAM #	EPA PARAM #	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMPLE FREQUENCY[3]	SPECIFIC TARGET VALUE[4] ug/l
VOLATILES								
216	34030	Benzene	624	10.0	BDL	G	1/5 YR	NA
484	32104	Bromoform	624	10.0	BDL	G	1/5 YR	NA
236	32102	Carbon Tetrachloride	624	10.0	BDL	G	1/5 YR	NA
652		Chlorodibromomethane	624	10.0		G	1/5 YR	NA
223	32106	Chloroform	624	10.0	BDL	G	1/5 YR	NA
649		Dichloromethane	624	20.0		G	1/5 YR	NA
244	79603	Dichlorobromomethane	624	20.0		G	1/5 YR	NA
260	34531	1,2-Dichloroethane	624	10.0	BDL	G	1/5 YR	NA
		1,1-Dichloroethylene	624	10.0		G	1/5 YR	NA
172	34371	Ethylbenzene	624	10.0	BDL	G	1/5 YR	NA
653		Monochlorobenzene	624	50.0		G	1/5 YR	NA
220	34475	Tetrachloroethylene	624	10.0		G	1/5 YR	NA
222	34010	Toluene	624	10.0	BDL	G	1/5 YR	NA
155	39180	Trichloroethylene	624	10.0		G	1/5 YR	NA
173	39175	Vinyl Chloride	624	10.0	BDL	G	1/5 YR	NA
ACIDS EXTRACTABLES								
		2-Chlorophenol	625	10.0	BDL	3G	1/5 YR	NA
		2,4 Dichlorophenol	625	10.0	BDL	3G	1/5 YR	NA
		2,4 Dimethylphenol	625	10.0	BDL	3G	1/5 YR	NA
210	39032	Pentachlorophenol	625	50.0	BDL	3G	1/5 YR	NA
175	46000	Phenol[6]	625	10.0	BDL	3G	1/5 YR	NA
602	34621	2,4,6-Trichlorophenol	625	10.0	BDL	3G	1/5 YR	NA
MISCELLANEOUS								
039	00610	Ammonia as NH3-N	350.1	200	2.4 mg/l	C	1/5 YR	NA
005	50060	Chlorine, Total Residual	(6)	100		G	1/5 YR	NA
018	00720	Cyanide	335.2	10.0	BDL	G	1/5 YR	NA

DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER QUALITY MONITORING
ATTACHMENT D

FACILITY NAME: Omega Protein
ADDRESS: P.O. Box 125, Reedville, Va. 22539

PERMIT NO.: VA0003867 OUTFALL NO.: 001

DEQ PARAM #	EPA PARAM #	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMPLE FREQUENCY[3]	SPECIFIC TARGET VALUE[4] ug/l
		Fecal Coliform N/CML)	(6)	(7)	1600 MPN/100 ml	G	1/5 YR	NA
137	00900	Hardness (as mg/l $CaCO_3$)	(6)	(7)	5340 mg/L	C	1/5 YR	NA
		Hydrogen Sulfide	(6)	(7)	2.5 mg/l	G	1/5 YR	NA
		Nitrate (as mg/l N)	(6)	(7)	BDL	C	1/5 YR	NA
350	30340	Tributlytin[9]	NSB 85-3295	(7)	BDL	C	1/5 YR if believed present by permittee	NA
252	81551	Xylenes (total)	SW 846 Method 8020	(7)	BDL	G	1/5 YR	NA

Graham Lyell Jett / General Manager
Name of Principal Exec. Officer or Authorized Agent / Title

Graham Lyell Jett / 2/5/02
Signature of Principal Officer or Authorized Agent / Date

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations. See 18 U.S.C. §1001 and 33 U.S.C. §1319. (Penalties under these statutes may include fines up to $10,000 and or maximum imprisonment of between 6 months and 5 years.)

JANUARY 7, 2003

MS. DENISE MOSCA
DEPARTMENT OF ENVIRONMENTAL QUALITY
P.O.BOX 669
429 EAST CHURCH STREET
KILMARNOCK, VA. 22482

DMR EXCURSIONS DECEMBER REPORT

DEAR DENISE:

DURING THE MONTH OF DECEMBER WE EXPERIENCED THREE EXCURSIONS THROUGH OUR 006 OUTFALL. AS WE HAVE STATED ON OUR LAST REPORTS WE WERE EXPECTING TO BE DISCHARGING THROUGH A DIFFUSER ON OUR "001" DISCHARGE AND FEEL THESE OCCURANCES WOULD NOT HAVE HAPPENED UNDER THE CONDITIONS OF THE EXPECTED NEW PERMIT.

SINCERELY,

Lyell Jett

LYELL JETT

ATTACHMENT C
DEPARTMENT OF ENVIRONMENTAL QUALITY
BMP Compliance Report

Facility Name: Omega Protein
Address: Reedville, Va.

VPDES Permit No.: VA0003867

Report Period: From 12/1/02 To 12/7/02

Paint Area	COMPLIANCE / NONCOMPLIANCE * (check as appropriate)	
_____	✓	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

*Comments on Noncompliance

Danny Lovell Vessel Manager
Name of Principal Exec. Officer or Authorized Agent / Title

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. See 18 U.S.C. paragraph 1001 and 33 U.S.C. paragraph 1319. (Penalties under these statutes may include fines up to $10,000 and or maximum imprisonment of between 6 months and 5 years).

Graham Lyell 1-7-03
Signature of Principal Officer or Authorized Agent / Date

ATTACHMENT C
DEPARTMENT OF ENVIRONMENTAL QUALITY
BMP Compliance Report

Facility Name: Omega Protein
Address: Reedville, Va.

VPDES Permit No.: VA0003867

Report Period: From 12/8/02 To 12/14/02

Paint Area	COMPLIANCE / NONCOMPLIANCE * (check as appropriate)	
	✓	

JAN 2003

*Comments on Noncompliance

Name of Principal Exec. Officer ~~or~~ Authorized Agent / Title

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. See 18 U.S.C. paragraph 1001 and 33 U.S.C. paragraph 1319. (Penalties under these statutes may include fines up to $10,000 and or maximum imprisonment of between 6 months and 5 years).

1-7-03

Signature of Principal Officer or Authorized Agent / Date

ATTACHMENT C
DEPARTMENT OF ENVIRONMENTAL QUALITY
BMP Compliance Report

Facility Name: Omega Protein
Address: Reedville, Va.

VPDES Permit No.: VA0003867

Report Period: From 12/15/02 To 12/21/02

Paint Area	COMPLIANCE	NONCOMPLIANCE *
	(check as appropriate)	
	✓	

*Comments on Noncompliance

Name of Principal Exec. Officer or Authorized Agent / Title

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. See 18 U.S.C. paragraph 1001 and 33 U.S.C. paragraph 1319. (Penalties under these statutes may include fines up to $10,000 and or maximum imprisonment of between 6 months and 5 years).

1-7-03

Signature of Principal Officer or Authorized Agent / Date

ATTACHMENT C
DEPARTMENT OF ENVIRONMENTAL QUALITY
BMP Compliance Report

Facility Name: Omega Protein
Address: Reedville, Va.

VPDES Permit No.: VA0003867

Report Period: From 12/22/02 To 12/28/02

Paint Area	COMPLIANCE / NONCOMPLIANCE * (check as appropriate)	
	✓	

*Comments on Noncompliance

Name of Principal Exec. Officer or Authorized Agent / Title

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. See 18 U.S.C. paragraph 1001 and 33 U.S.C. paragraph 1319. (Penalties under these statutes may include fines up to $10,000 and or maximum imprisonment of between 6 months and 5 years).

Graham Lyell Jett 1-7-03

Signature of Principal Officer or Authorized Agent / Date

ATTACHMENT C
DEPARTMENT OF ENVIRONMENTAL QUALITY
BMP Compliance Report

Facility Name: Omega Protein
Address: Reedville, Va.

VPDES Permit No.: VA0003867

Report Period: From 12/29/02 To 12/31/02

Paint Area	COMPLIANCE (check as appropriate)	NONCOMPLIANCE *
	✓	

*Comments on Noncompliance

Name of Principal Exec. Officer or Authorized Agent / Title

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. See 18 U.S.C. paragraph 1001 and 33 U.S.C. paragraph 1319. (Penalties under these statutes may include fines up to $10,000 and or maximum imprisonment of between 6 months and 5 years).

Signature of Principal Officer or Authorized Agent / Date 1-7-03

GILBERT W. CLIFFORD & ASSOCIATES, INC.
150 C Olde Greenwich Dr., Fredericksburg, VA 22408
(540) 898-2115

Omega Protein
December, 2002

Analysis	Date Collected	Date Received	Station	Results (mg/L)	Date/Time Analyzed	Analyst	Method	Detection Limit(mg/L)
TSS	12/3/02	12/4/02	Discharge 006 (0721)	21	12-04-02 (1500)	WLW	SM 2540-D	1
	12/4/02	12/5/02	Discharge 006 (0740)	26.3	12-06-02 (1200)	WLW		
	12/13/02	12/14/02	Discharge 006 (0750)	31.1	12-16-02 (0930)	WLW		
	12/14/02	12/14/02	Discharge 006 (0925)	8.3	12-16-02 (0930)	WLW		
BOD	12/3/02	12/4/02	Discharge 006 (0721)	10.1	12-04-02 (1120)	SSC	SM 5210 B	2
	12/4/02	12/5/02	Discharge 006 (0740)	20.4	12-05-02 (1120)	SSC		
	12/13/02	12/14/02	Discharge 006 (0750)	8.6	12-14-02 (1440)	SSC		
	12/14/02	12/14/02	Discharge 006 (0925)	10.9	12-14-02 (1440)	SSC		
Oil & Grease	12/3/02	12/4/02	Discharge 006 (0721)	<5	12-05-02 (1300)	WLW	EPA 1664	5
	12/4/02	12/5/02	Discharge 006 (0740)	<5	12-05-02 (1300)	WLW		
	12/13/02	12/14/02	Discharge 006 (0750)	<5	12-17-02 (0945)	WLW		
	12/14/02	12/14/02	Discharge 006 (0925)	<5	12-17-02)0945)	WLW		
Ammonia Nitrogen	12/3/02	12/4/02	Discharge 006 (0721)	2.38	12-04-02 (1435)	WLW	EPA 350.2	0.1 Nessler
	12/13/02	12/14/02	Discharge 006 (0750)	0.703	12-16-02 (0845)	WLW		
TKN	12/3/02	12/4/02	Discharge 006 (0721)	2.65	12/4/02	WLW		
	12/13/02	12/14/02	Discharge 006 (0750)	0.84	12/16/02	WLW		
Nitrites - N	12/3/02	12/4/02	Discharge 006 (0721)	0.016	12-04-02 (0845)	SSC	SM4500-No2-B	0.01
	12/13/02	12/14/02	Discharge 006 (0750)	0.023	12-14-02 (1430)	SSC		
Nitrates-N	12/3/02	12/4/02	Discharge 006 (0721)	0.10	12-06-02 (1025)	SSC	EPA 352.1	0.1
	12/13/02	12/14/02	Discharge 006 (0750)	<.10	12-16-02 (1030)	SSC		
Total Nitrogen	12/3/02	12/4/02	Discharge 006 (0721)	2.77				
	12/13/02	12/14/02	Discharge 006 (0750)	0.963				
Total Po4-P	12/3/02	12/4/02	Discharge 006 (0721)	0.202	12-04-02 (1445)	SSC	SM 4500-P E	0.01
	12/13/02	12/14/02	Discharge 006 (0750)	0.585	12-16-02 (1050)	WLW		
Cyanide	12/3/02	12/4/02	Discharge 006 (0721)	<.01				0.01
	12/13/02	12/14/02	Discharge 006 (0750)	<.01				

Note : All Cyanide analysis are performed by Prochling & Robertson Laboratories in Richmond, VA

GILBERT W. CLIFFORD & ASSOCIATES, INC.
150 C Olde Greenwich Dr., Fredericksburg, VA 22408
(540) 898-2115

Omega Protein
December, 2002

Analysis	Date Collected	Date Received	Station	Results (mg/L)	Date/Time Analyzed	Analyst	Method	Detection Limit (mg/L)
TSS	12/4/02	12/5/02	Discharge 002 (0805)	27.2	12-06-02 (1200)	WLW	SM 2540-D	1
BOD	12/4/02	12/5/02	Discharge 002 (0805)	12.4	12-05-02 (1120)	SSC	SM 5210 B	2
Oil & Grease	12/4/02	12/5/02	Discharge 002 (0805)	<5	12-05-2 (1300)	WLW	EPA 1664	5
Ammonia Nitrogen	12/4/02	12/5/02	Discharge 002 (0805)	27.7	12-05-02 (1110)	WLW	EPA 350.2	1 Titrametric

Omega Protein, Inc
VPDES Permit #VA0003867

Month of December, 2002

Chesapeake Bay Water Quality Monitoring Data

	Predischarge							After Discharge						
Date	Time of Sample	BOD (mg/L)	DO (mg/L)	AMM (mg/L)	Temp C	pH SU	Salinity ppt	Time of Sample	BOD (mg/L)	DO (mg/L)	AMM (mg/L)	Temp C	pH (SU)	Salinity ppt
1														
2	1130	7.4	7.1	0.681	13	7.1	16.0	1130	7.6	7.6	0.664	11	6.8	16.2
3														
4														
5														
6														
7														
8														
9														
10														
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30														
31														

Name of Vessel [illegible]

Name of Sampler [illegible] Boyd

Omega Protein, Inc
VPDES Permit #VA0003867

Month of December, 20XX

Chesapeake Bay Water Quality Monitoring Data

	Predischarge							After Discharge						
Date	Time of Sample	BOD (mg/L)	DO (mg/L)	AMM (mg/L)	Temp C	pH SU	Salinity ppt	Time of Sample	BOD (mg/L)	DO (mg/L)	AMM (mg/L)	Temp C	pH (SU)	Salinity ppt
1														
2	1700	7.0	7.1	0.669	14	8.5	16.3	1700	6.6	7.5	0.764	11	8.5	16.8
3														
4														
5														
6														
7														
8														
9														
10														
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31														

Name of Vessel: Omega Protein

Name of Sampler: Tom Boyd

ZAPATA PROTEIN
REEDVILLE, VIRGINIA
DMR REPORTING

	LAGOON 002			DITCH 006		
DATE	pH	TEMP C	FLOW	pH	TEMP C	FLOW
12/01/02						
12/02/02						
12/03/02				7.81	17	2,036,479
12/04/02	7.81	12	249,000	7.99	13	11,841,120
12/05/02						
12/06/02	7.8	5	218,200			
12/07/02						
12/08/02						
12/09/02						
12/10/02						
12/11/02						
12/12/02						
12/13/02				8.19	9	4,939,800
12/14/02	7.86	7	280,500	7.61	9	8,007,320
12/15/02	end of season			end of season		
12/16/02						
12/17/02						
12/18/02						
12/19/02						
12/20/02						
12/21/02						
12/22/02						
12/23/02						
12/24/02						
12/25/02						
12/26/02						
12/27/02						
12/28/02						
12/29/02						
12/30/02						
12/31/02						
TOTAL	23.47	24	~~4987.748~~	31.57	48	25.718
AVG.	7.82	8	~~349.249~~	7.89	12	6.430
MIN.	7.8	5	.218	7.61	9	2.036
MAX.	7.86	12	.281	8.19	17	11.84

SEWER problems

NO READING

CONTINUED FROM THE FRONT

C. Except for storm runoff, leaks, or spills, are any of the discharges described in Items II-A or B intermittent or seasonal?

☒ YES (complete the following table) ☐ NO (go to Item III)

1. OUTFALL NUMBER (list)	2. OPERATION(s) CONTRIBUTING FLOW (list)	3. FREQUENCY a. DAYS PER WEEK (specify average)	3. FREQUENCY b. MONTHS PER YEAR (specify average)	4. FLOW a. FLOW RATE (in mgd) 1. LONG TERM AVERAGE	4. FLOW a. FLOW RATE (in mgd) 2. MAXIMUM DAILY	4. FLOW b. TOTAL VOLUME (specify with units) 1. LONG TERM AVERAGE	4. FLOW b. TOTAL VOLUME (specify with units) 2. MAXIMUM DAILY	4. FLOW c. DURATION (in days)
001	Scrubbers	5	8	3.1	4.2			150
002	Evaprator Condensate Treatment Ponds	7	8	0.21	0.48			240
003	Excess Evaporator Cond.	0	0	Not in use at this time				
006	Evaporator Cooling Water	5	8	7.5	14.2			150

III. PRODUCTION

A. Does an effluent guideline limitation promulgated by EPA under Section 304 of the Clean Water Act apply to your facility?

☒ YES (complete Item III-B) ☐ NO (go to Section IV)

B. Are the limitations in the applicable effluent guideline expressed in terms of production (or other measure of operation)?

☐ YES (complete Item III-C) ☒ NO (go to Section IV)

C. If you answered "yes" to Item III-B, list the quantity which represents an actual measurement of your level of production, expressed in the terms and units used in the applicable effluent guideline, and indicate the affected outfalls.

1. AVERAGE DAILY PRODUCTION a. QUANTITY PER DAY	1. AVERAGE DAILY PRODUCTION b. UNITS OF MEASURE	1. AVERAGE DAILY PRODUCTION c. OPERATION, PRODUCT, MATERIAL, ETC. (specify)	2. AFFECTED OUTFALLS (list outfall numbers)
3.75 million	pounds	Menhaden Fish	001, 002, 003 & 006

IV. IMPROVEMENTS

A. Are you now required by any Federal, State or local authority to meet any implementation schedule for the construction, upgrading or operation of wastewater treatment equipment or practices or any other environmental programs which may affect the discharges described in this application? This includes, but is not limited to, permit conditions, administrative or enforcement orders, enforcement compliance schedule letters, stipulations, court orders, and grant or loan conditions.

☐ YES (complete the following table) ☒ NO (go to Item IV-B)

1. IDENTIFICATION OF CONDITION, AGREEMENT, ETC.	2. AFFECTED OUTFALLS a. NO.	2. AFFECTED OUTFALLS b. SOURCE OF DISCHARGE	3. BRIEF DESCRIPTION OF PROJECT	4. FINAL COMPLIANCE DATES a. REQUIRED	4. FINAL COMPLIANCE DATES b. PROJECTED

B. OPTIONAL: You may attach additional sheets describing any additional water pollution control programs (or other environmental projects which may affect your discharges) you now have underway or which you plan. Indicate whether each program is now underway or planned, and indicate your actual or planned schedules for construction. ☐ MARK "X" IF DESCRIPTION OF ADDITIONAL CONTROL PROGRAMS IS ATTACHED

March 12, 2002

Denise Mosca
Commonwealth of Virginia
Department of Environmental Quality
Kilmarnock, VA

Re: Letter dated February 19, 2002
VPDES Permit Reissuance VA0003867
Omega Protein, Inc. Northumberland County

Dear Ms. Mosca

This letter responds to your request for more information, dated February 19. Our response is in the same format as your letter:

Cover Letter

a. Yes, the shipbuilding activity (off season maintenance) is only to be performed at the Fairport Boatyard.

FORM 1- General Information

a. The General Manager's original signature is provided.

Attachment D

a. The General Manager's original signature is provided

b. The Detection Levels are provided

c. All analyses are provided except for Total Residual Chlorine which was overlooked when the analysis was performed. The plant is not operational now so a sample can't be taken. Chlorine has not and is not added to any of the outfalls. In fact, chlorine is not present on the plant site since it is not used in any process. The only possible exception are "chlorine" tablets that are used in some of the vessels' on board sanitary treatment unit. These tablets are restricted for use by the marine department.

You may be interested in the attached spreadsheet which provides the complete database of ammonia data for the future outfalls 001 and 006. As explained previously, we developed a sampling procedure in an effort to avoid "short circuiting" and to separate the scrubber outfall from the evaporator outfall. The data seems to suggest that the short circuiting is somewhere between "start up" and 1.5 hours after start up.

The 11.8 mg/l ammonia on September 10 is valid, we believe, in view of the 13.7 and the 89.9. However, the 89.9 is, by far, higher than anything we have seen in the past and may not be a valid number.

If you have any further questions, please contact me at 804/453-4211 or Bill Black at 713/868-2770.

Sincerely,

Lyell Jett

Lyell Jett
General Manager

Cc/ Bill Black

Attachment:
Ammonia datasheet
Form 1
Attachment D for Outfalls 001, 002, 006

Omega Protein-Reedville

3/12/2002

Ammonia results for future outfalls, mg/l

Date	for 001 start up	1.5 hrs later	2 hrs later	for 006 start up	1.5 hrs later	2 hrs later
4-Sep	5.43	13.7				
10-Sep	11.8			0.309		
17-Sep	4.18		89.9	0.298		0.575
22-Oct	2.4					
4-Dec	6		9.24	0.281		0.553
avg	5.962			0.296		

DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER QUALITY MONITORING
ATTACHMENT D

FACILITY NAME: Omega Protein
ADDRESS: P.O. Box 125, Reedville, Va. 22539

PERMIT NO.: VA0003867 OUTFALL NO.: 006

DEQ PARAM #	EPA PARAM #	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[5]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMPLE FREQUENCY[3]	SPECIFIC TARGET VALUE[4] ug/L
		METALS ug/L						
		Antimony (Dis.)	(5)	(5)	<.005 mg/L <5	G	1/5 YR	129000 all outfalls
		Arsenic III (Dis.)	(5)	(5)	<.05 mg/L <50	G	1/5 YR	[001,003, C04,005, 006: 55.2] [C02: 634.8]
440	01025	Cadmium (Dis.)	(5)	(5)	<.001 mg/L <1	G	1/5 YR	[001,003, 004,005, 006: 34.4] [002: 279]
023	01032	Chromium VI	(5)	(5)	<.01 mg/L <10	G	1/5 YR	[001,003, 004,005, 006: 880] [002: 1500]
442	01040	Copper (Dis.)	(5)	(5)	.117 mg/L 117	G	1/5 YR	[001,003, 004,005, 006: 2.32] [002: 26.68]
405	01049	Lead (Dis.)	(5)	(5)	<.001 mg/L <1	G	1/5 YR	[001,003, 004,005, 006: 176] [002: 255]
444	71890	Mercury (Dis.)	(5)	(5)	<.0002 mg/L <0.2	G	1/5 YR	[001,002 004,005, 006: 1.0] [003: 1.68]
445	01065	Nickel (Dis.)	(5)	(5)	.014 mg/L 14	G	1/5 YR	[001,003, 004,005, 006: 60] [002: 249]
446	01145	Selenium (Dis.)	(5)	(5)	<.005 mg/L <5	G	1/5 YR	[001,003, 004,005, 006: 240] [002: 2130]
447	01075	Silver (Dis.)	(5)	(5)	.024 mg/L 24	G	1/5 YR	[001,003, C04,005, C06: 1.84] [002: 21.16]
448	01092	Zinc (Dis.)	(5)	(5)	<.02 mg/L <20	G	1/5 YR	[001,003, 004,005, 006: 76] [002: 874]

Manganese (Dis) .098 mg/L

DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER QUALITY MONITORING
ATTACHMENT D

FACILITY NAME: Omega Protein
ADDRESS: P.O. Box 125, Reedville, Va. 22539

PERMIT NO.: VA0003867 OUTFALL NO.: 006

DEQ PARAM #	EPA PARAM #	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMPLE FREQUENCY[3]	SPECIFIC TARGET VALUE[4] ug/L
PESTICIDES/PCB'S								
332	39330	Aldrin	608	0.05	<.05 ug/L	3G	1/5 YR	NA
333	39350	Chlordane	608	0.2	<1.0 ug/L	3G	1/5 YR	NA
334	77969	Chlorpyrifos (Dursban)	622	(7)	<.1 ug/L	3G	1/5 YR	NA
		DDD	608	0.1	<.15 ug/L	3G	1/5 YR	NA
		DDE	608	0.1	<.05 ug/L	3G	1/5 YR	NA
335	39370	DDT	608	0.1	<.15 ug/L	3G	1/5 YR	NA
336	39560	Demeton	(6)	(7)	<2.0 ug/L	3G	1/5 YR	NA
337	39380	Dieldrin	608	0.1	<.05 ug/L	3G	1/5 YR	NA
		Endosulfan	608	0.1	<.15 ug/L	3G	1/5 YR	NA
339	39390	Endrin	608	0.1	<.15 ug/L	3G	1/5 YR	NA
340	39580	Guthion	622	(7)	<20 mg/L	3G	1/5 YR	NA
341	39410	Heptachlor	608	0.05	<.05 ug/L	3G	1/5 YR	NA
342	77835	Hexachlorocyclohexane (Lindane)	608	0.05	<.04 ug/L	3G	1/5 YR	NA
		Kepone	(6)	(7)	<2.0 ug/L	3G	1/5 YR	NA
343	39530	Malathion	(6)	(7)	<2.0 ug/L	3G	1/5 YR	NA
344	39480	Methoxychlor	(6)	(7)	<.40 ug/L	3G	1/5 YR	NA
345	39755	Mirex	(6)	(7)	<.10 ug/L	3G	1/5 YR	NA
641		PCB-1242	608	1.0	<1.0 mg/L	3G	1/5 YR	NA
642		PCB-1254	608	1.0	<1.0 mg/L	3G	1/5 YR	NA
643		PCB-1221	608	1.0	<1.0 mg/L	3G	1/5 YR	NA
644		PCB-1232	608	1.0	<1.0 mg/L	3G	1/5 YR	NA
645		PCB-1248	608	1.0	<1.0 mg/L	3G	1/5 YR	NA
646	39508	PCB-1260	608	1.0	<1.0 mg/L	3G	1/5 YR	NA
646		PCB-1016	608	1.0	<1.0 mg/L	3G	1/5 YR	NA

DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER QUALITY MONITORING
ATTACHMENT D

FACILITY NAME: Omega Protein
ADDRESS: P.O. Box 125, Reedville, Va. 22539

PERMIT NO.: VA0003867 OUTFALL NO.: 006

DEQ PARAM #	EPA PARAM #	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMPLE FREQUENCY[3]	SPECIFIC TARGET VALUE[4] ug/L
349	39400	Toxaphene	608	5.0	<1.0 ug/L	3G	1/5 YR	NA
647		2-(2,4,5-Trichlorophenoxy) propionic acid (Silvex)	(6)	(7)	<.002 mg/L	3G	1/5 YR (PWS)	NA
BASE NEUTRAL EXTRACTABLES								
		Acenaphthene	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
275	34222	Anthracene	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
276	34526	Benzo(a)anthracene	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
648		Benzo(b)fluoranthene	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
278	34242	Benzo(k)fluoranthene	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
277	34247	Benzo(a)pyrene	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
		Butyl benzyl phthalate	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
282	34320	Chrysene	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
654		Dibenz(a,h)anthracene	625	20.0	<10.0 ug/L	3G	1/5 YR	NA
		Dibutyl phthalate	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
259	34536	1,2-Dichlorobenzene	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
264	34566	1,3-Dichlorobenzene	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
266	34571	1,4-Dichlorobenzene	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
		Diethyl phthalate	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
170		Di-2-Ethylhexyl Phthalate	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
239	34611	2,4-Dinitrotoluene	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
287	34376	Fluoranthene	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
288	34381	Fluorene	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
651		Indeno(1,2,3-cd)pyrene	625	20.0	<10.0 ug/L	3G	1/5 YR	NA
650		Isophorone	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
293	34696	Naphthalene	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
296	34469	Pyrene	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
		1,2,4-Trichlorobenzene	625	10.0	<10.0 ug/L	3G	1/5 YR	NA

DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER QUALITY MONITORING
ATTACHMENT D

FACILITY NAME: Omega Protein
ADDRESS: P.O. Box 125, Reedville, Va. 22539

PERMIT NO.: VA0003867 OUTFALL NO.: 006

DEQ PARAM #	EPA PARAM #	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMPLE FREQUENCY[3]	SPECIFIC TARGET VALUE[4]
VOLATILES								
216	34030	Benzene	624	10.0	< 5.0 ug/L	G	1/5 YR	NA
484	32104	Bromoform	624	10.0	< 5.0 ug/L	G	1/5 YR	NA
236	32102	Carbon Tetrachloride	624	10.0	< 5.0 ug/L	G	1/5 YR	NA
652		Di-Chlorodibromomethane	624	10.0	< 5.0 ug/L	G	1/5 YR	NA
223	32106	Chloroform	624	10.0	< 5.0 ug/L	G	1/5 YR	NA
649		Dichloromethane	624	20.0	< 5.0 ug/L	G	1/5 YR	NA
244	79603	Dichlorobromomethane	624	20.0	< 5.0 ug/L	G	1/5 YR	NA
260	34531	1,2-Dichloroethane	624	10.0	< 5.0 ug/L	G	1/5 YR	NA
		1,1-Dichloroethylene	624	10.0	< 5.0 ug/L	G	1/5 YR	NA
172	34371	Ethylbenzene	624	10.0	< 5.0 ug/L	G	1/5 YR	NA
653		Monochlorobenzene	624	50.0	< 5.0 ug/L	G	1/5 YR	NA
220	34475	Tetrachloroethylene	624	10.0	< 5.0 ug/L	G	1/5 YR	NA
222	34010	Toluene	624	10.0	< 5.0 ug/L	G	1/5 YR	NA
155	39180	Trichloroethylene	624	10.0	< 5.0 ug/L	G	1/5 YR	NA
173	39175	Vinyl Chloride	624	10.0	< 10.0 ug/L	G	1/5 YR	NA
ACIDS EXTRACTABLES								
		2-Chlorophenol	625	10.0	< 10.0 ug/L	3G	1/5 YR	NA
		2,4 Dichlorophenol	625	10.0	< 10.0 ug/L	3G	1/5 YR	NA
		2,4 Dimethylphenol	625	10.0	< 10.0 ug/L	3G	1/5 YR	NA
210	39032	Pentachlorophenol	625	50.0	< 50.0 ug/L	3G	1/5 YR	NA
175	46000	Phenol[5]	625	10.0	< 10.0 ug/L	3G	1/5 YR	NA
602	34621	2,4,6-Trichlorophenol	625	10.0	< 10.0 ug/L	3G	1/5 YR	NA
MISCELLANEOUS								
039	00610	Ammonia as NH3-N	350.1	200	3.7 mg/L	C	1/5 YR	NA
005	50060	Chlorine, Total Residual	(6)	100	missed sample	G	1/5 YR	NA
018	00720	Cyanide	335.2	10.0	< .01 mg/L	G	1/5 YR	NA

DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER QUALITY MONITORING
ATTACHMENT D

FACILITY NAME: Omega Protein
ADDRESS: P.O. Box 125, Reedville, Va. 22539

PERMIT NO.: VA0003867 OUTFALL NO.: 006

DEQ PARAM #	EPA PARAM #	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMPLE FREQUENCY[3]	SPECIFIC TARGET VALUE[4] ug/l
		Fecal Coliform N/CML)	(6)	(7)	240 MPN/100 ML	G	1/5 YR	NA
137	00900	Hardness (as mg/l $CaCO_3$)	(6)	(7)	5000 mg/L	C	1/5 YR	NA
		Hydrogen Sulfide	(6)	(7)	3.3 mg/L	G	1/5 YR	NA
		Nitrate (as mg/l N)	(6)	(7)	<.1 mg/L	C	1/5 YR	NA
350	30340	Tributlytin[5]	NSB 85-3295	(7)	<.50 mg/L	C	1/5 YR if believed present by permittee	NA
252	81551	Xylenes (total)	SW 846 Method 8020	(7)	<10.0 ug/L	G	1/5 YR	NA

Graham Lyell Jett — General Manager
Name of Principal Exec. Officer or Authorized Agent / Title

Graham Lyell Jett — 3/13/02
Signature of Principal Officer or Authorized Agent / Date

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations. See 18 U.S.C. §1001 and 33 U.S.C. §1319. (Penalties under these statutes may include fines up to $10,000 and or maximum imprisonment of between 6 months and 5 years.)

DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER QUALITY MONITORING
ATTACHMENT D

FACILITY NAME: Omega Protein
ADDRESS: P.O. Box 125, Reedville, Va. 22539

PERMIT NO.: VA0003867 OUTFALL NO.: 006

DEQ PARAM #	EPA PARAM #	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMPLE FREQUENCY[3]	SPECIFIC TARGET VALUE[4] ug/l
METALS								
		Antimony (Dis.)	(5)	(5)	<.005 mg/L	G	1/5 YR	129000 all outfalls
		Arsenic III (Dis.)	(5)	(5)	<.05 mg/L	G	1/5 YR	[001,003, 004,005, 006: 55.2] [002: 634.8]
440	01025	Cadmium (Dis.)	(5)	(5)	<.001 mg/L	G	1/5 YR	[001,003, 004,005, 006: 34.4] [002: 279]
023	01032	Chromium VI	(5)	(5)	<.01 mg/L	G	1/5 YR	[001,003, 004,005, 006: 880] [002: 1500]
442	01040	Copper (Dis.)	(5)	(5)	.117 mg/L	G	1/5 YR	[001,003, 004,005, 006: 2.32] [002: 26.68]
405	01049	Lead (Dis.)	(5)	(5)	<.001 mg/L	G	1/5 YR	[001,003, 004,005, 006: 176] [002: 255]
444	71890	Mercury (Dis.)	(5)	(5)	<.0002 mg/L	G	1/5 YR	[001,002 004,005, 006: 1.0] [003: 1.68]
445	01065	Nickel (Dis.)	(5)	(5)	.014 mg/L	G	1/5 YR	[001,003, 004,005, 006: 60] [002: 249]
446	01145	Selenium (Dis.)	(5)	(5)	<.005 mg/L	G	1/5 YR	[001,003, 004,005, 006: 240] [002: 2130]
447	01075	Silver (Dis.)	(5)	(5)	.024 mg/L	G	1/5 YR	[001,003, 004,005, 006: 1.84] [002: 21.16]
448	01092	Zinc (Dis.)	(5)	(5)	<.02 mg/L	G	1/5 YR	[001,003, 004,005, 006: 76] [002: 874]

008 mg/L

DEPARTMENT OF ENVIRONMENTAL QUALITY
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FACILITY NAME: Omega Protein
ADDRESS: P.O. Box 125, Reedville, Va. 22539

PERMIT NO.: VA0003867 OUTFALL NO.: 006

DEQ PARAM #	EPA PARAM #	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMPLE FREQUENCY[3]	SPECIFIC TARGET VALUE[4] ug/l
PESTICIDES/PCB'S								
332	39330	Aldrin	608	0.05	<.05 ug/L	3G	1/5 YR	NA
333	39350	Chlordane	608	0.2	<1.0 ug/L	3G	1/5 YR	NA
334	77969	Chlorpyrifos (Dursban)	622	(7)	<.1 ug/L	3G	1/5 YR	NA
		DDD	608	0.1	<.15 ug/L	3G	1/5 YR	NA
		DDE	608	0.1	<.05 ug/L	3G	1/5 YR	NA
335	39370	DDT	608	0.1	<.15 ug/L	3G	1/5 YR	NA
336	39560	Demeton	(6)	(7)	<2.0 ug/L	3G	1/5 YR	NA
337	39380	Dieldrin	608	0.1	<.05 ug/L	3G	1/5 YR	NA
		Endosulfan	608	0.1	<.15 ug/L	3G	1/5 YR	NA
339	39390	Endrin	608	0.1	<.15 ug/L	3G	1/5 YR	NA
340	39580	Guthion	622	(7)	<20 mg/L	3G	1/5 YR	NA
341	39410	Heptachlor	608	0.05	<.05 ug/L	3G	1/5 YR	NA
342	77835	Hexachlorocyclohexane (Lindane)	608	0.05	<.04 ug/L	3G	1/5 YR	NA
		Kepone	(6)	(7)	<2.0 ug/L	3G	1/5 YR	NA
343	39530	Malathion	(6)	(7)	<2.0 ug/L	3G	1/5 YR	NA
344	39480	Methoxychlor	(6)	(7)	<.40 ug/L	3G	1/5 YR	NA
345	39755	Mirex	(6)	(7)	<.10 ug/L	3G	1/5 YR	NA
641		PCB-1242	608	1.0	<1.0 mg/L	3G	1/5 YR	NA
642		PCB-1254	608	1.0	<1.0 mg/L	3G	1/5 YR	NA
643		PCB-1221	608	1.0	<1.0 mg/L	3G	1/5 YR	NA
644		PCB-1232	608	1.0	<1.0 mg/L	3G	1/5 YR	NA
645		PCB-1248	608	1.0	<1.0 mg/L	3G	1/5 YR	NA
618	39508	PCB-1260	608	1.0	<1.0 mg/L	3G	1/5 YR	NA
646		PCB-1016	608	1.0	<1.0 mg/L	3G	1/5 YR	NA

DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER QUALITY MONITORING
ATTACHMENT D

FACILITY NAME: Omega Protein
ADDRESS: P.O. Box 125, Reedville, Va. 22539

PERMIT NO.: VA0003867 OUTFALL NO.: 006

DEQ PARAM #	EPA PARAM #	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMPLE FREQUENCY[3]	SPECIFIC TARGET VALUE[4] ug/l
349	39400	Toxaphene	608	5.0	<1.0 ug/L	3G	1/5 YR	NA
647		2-(2,4,5-Trichlorophenoxy) propionic acid (Silvex)	(6)	(7)	<.002 mg/L	3G	1/5 YR (PWS)	NA
BASE NEUTRAL EXTRACTABLES								
		Acenaphthene	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
275	34222	Anthracene	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
276	34526	Benzo(a)anthracene	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
648		Benzo(b)fluoranthene	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
278	34242	Benzo(k)fluoranthene	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
277	34247	Benzo(a)pyrene	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
		Butyl benzyl phthalate	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
282	34320	Chrysene	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
654		Dibenz(a,h)anthracene	625	20.0	<10.0 ug/L	3G	1/5 YR	NA
		Dibutyl phthalate	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
259	34536	1,2-Dichlorobenzene	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
264	34566	1,3-Dichlorobenzene	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
266	34571	1,4-Dichlorobenzene	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
		Diethyl phthalate	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
170		Di-2-Ethylhexyl Phthalate	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
239	34611	2,4-Dinitrotoluene	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
287	34376	Fluoranthene	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
288	34381	Fluorene	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
651		Indeno(1,2,3-cd)pyrene	625	20.0	<10.0 ug/L	3G	1/5 YR	NA
650		Isophorone	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
293	34696	Naphthalene	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
296	34469	Pyrene	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
		1,2,4-Trichlorobenzene	625	10.0	<10.0 ug/L	3G	1/5 YR	NA

DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER QUALITY MONITORING
ATTACHMENT D

FACILITY NAME: Omega Protein
ADDRESS: P.O. Box 125, Reedville, Va. 22539

PERMIT NO.: VA0003867 OUTFALL NO.: 006

DEQ PARAM #	EPA PARAM #	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMPLE FREQUENCY[3]	SPECIFIC TARGET VALUE[4] ug/l
VOLATILES								
216	34030	Benzene	624	10.0	< 5.0 ug/L	G	1/5 YR	NA
484	32104	Bromoform	624	10.0	< 5.0 ug/L	G	1/5 YR	NA
236	32102	Carbon Tetrachloride	624	10.0	< 5.0 ug/L	G	1/5 YR	NA
652		Di-Chlorodibromomethane	624	10.0	< 5.0 ug/L	G	1/5 YR	NA
223	32106	Chloroform	624	10.0	< 5.0 ug/L	G	1/5 YR	NA
649		Dichloromethane	624	20.0	< 5.0 ug/L	G	1/5 YR	NA
244	79603	Dichlorobromomethane	624	20.0	< 5.0 ug/L	G	1/5 YR	NA
260	34531	1,2-Dichloroethane	624	10.0	< 5.0 ug/L	G	1/5 YR	NA
		1,1-Dichloroethylene	624	10.0	< 5.0 ug/L	G	1/5 YR	NA
172	34371	Ethylbenzene	624	10.0	< 5.0 ug/L	G	1/5 YR	NA
653		Monochlorobenzene	624	50.0	< 5.0 ug/L	G	1/5 YR	NA
220	34475	Tetrachloroethylene	624	10.0	< 5.0 ug/L	G	1/5 YR	NA
222	34010	Toluene	624	10.0	< 5.0 ug/L	G	1/5 YR	NA
155	39180	Trichloroethylene	624	10.0	< 5.0 ug/L	G	1/5 YR	NA
173	39175	Vinyl Chloride	624	10.0	< 10.0 ug/L	G	1/5 YR	NA
ACIDS EXTRACTABLES								
		2-Chlorophenol	625	10.0	< 10.0 ug/L	3G	1/5 YR	NA
		2,4 Dichlorophenol	625	10.0	< 10.0 ug/L	3G	1/5 YR	NA
		2,4 Dimethylphenol	625	10.0	< 10.0 ug/L	3G	1/5 YR	NA
210	39032	Pentachlorophenol	625	50.0	< 50.0 ug/L	3G	1/5 YR	NA
175	46000	Phenol[8]	625	10.0	< 10.0 ug/L	3G	1/5 YR	NA
602	34621	2,4,6-Trichlorophenol	625	10.0	< 10.0 ug/L	3G	1/5 YR	NA
MISCELLANEOUS								
039	00610	Ammonia as NH3-N	350.1	200	3.7 mg/L	C	1/5 YR	NA
005	50060	Chlorine, Total Residual	(6)	100	missed sample	G	1/5 YR	NA
018	00720	Cyanide	335.2	10.0	< .01 mg/L	G	1/5 YR	NA

DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER QUALITY MONITORING
ATTACHMENT D

FACILITY NAME: Omega Protein
ADDRESS: P.O. Box 125, Reedville, Va. 22539

PERMIT NO.: VA0003867 OUTFALL NO.: 006

DEQ PARAM #	EPA PARAM #	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMPLE FREQUENCY[3]	SPECIFIC TARGET VALUE[4] ug/l
		Fecal Coliform N/CML)	(6)	(7)	240 MPN/100 ML	G	1/5 YR	NA
137	00900	Hardness (as mg/l $CaCO_3$)	(6)	(7)	5000 mg/L	C	1/5 YR	NA
		Hydrogen Sulfide	(6)	(7)	3.3 mg/L	G	1/5 YR	NA
		Nitrate (as mg/l N)	(6)	(7)	<.1 mg/L	C	1/5 YR	NA
350	30340	Tributlytin[9]	NSB 85-3295	(7)	<.50 mg/L	C	1/5 YR if believed present by permittee	NA
252	81551	Xylenes (total)	SW 846 Method 8020	(7)	<10.0 mg/L	G	1/5 YR	NA

Graham Lyell Jett — General Manager
Name of Principal Exec. Officer or Authorized Agent / Title

Graham Lyell Jett — 3/13/02
Signature of Principal Officer or Authorized Agent / Date

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations. See 18 U.S.C. §1001 and 33 U.S.C. §1319. (Penalties under these statutes may include fines up to $10,000 and or maximum imprisonment of between 6 months and 5 years.)

2077 Fish Oil

VIII. OPERATOR INFORMATION

A. NAME: Omega Protein, Inc.

B. Is the name listed in Item VIII-A also the owner? [X] YES [ ] NO

C. STATUS OF OPERATOR (Enter the appropriate letter into the answer box; if "Other", specify.)
F = FEDERAL, S = STATE, P = PRIVATE, M = PUBLIC (other than federal or state), O = OTHER (specify)
M (specify)

D. PHONE (area code & no.): 804 453 4211

E. STREET OR P.O. BOX: PO Box 175

F. CITY OR TOWN: Reedville

G. STATE: VA

H. ZIP CODE:

IX. INDIAN LAND

Is the facility located on Indian lands? [ ] YES [X] NO

X. EXISTING ENVIRONMENTAL PERMITS

A. NPDES (Discharges to Surface Water): 9 N VA0003867

D. PSD (Air Emissions from Proposed Sources): 9 P 40278

B. UIC (Underground Injection of Fluids): 9 U

E. OTHER (specify): 9 VAR540298 (specify) Storm Water

C. RCRA (Hazardous Wastes): 9 R

E. OTHER (specify): 9 VAR540312 (specify) Storm Water-Fairport

XI. MAP

Attach to this application a topographic map of the area extending to at least one mile beyond property boundaries. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers and other surface water bodies in the map area. See instructions for precise requirements.

XII. NATURE OF BUSINESS (provide a brief description)

Processing of Menhaden Fish to obtain Fish Oil, Fish Solubles and Fish Meal for sale for use in animal feed and other applications

XIII. CERTIFICATION (see instructions)

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in the application, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME & OFFICIAL TITLE (type or print): Lyell Jett, General Manager

B. SIGNATURE: Lyell Jett

C. DATE SIGNED: 3/13/02

COMMENTS FOR OFFICIAL USE ONLY

C. THIRD

7 | 2077 | (specify) Fish Oil

D. FOURTH

7 | | (specify)

VIII. OPERATOR INFORMATION

A. NAME

Omega Protein, Inc.

B. Is the name listed in Item VIII-A also the owner? ☒ YES ☐ NO

C. STATUS OF OPERATOR (Enter the appropriate letter into the answer box; if "Other", specify.)

F = FEDERAL
S = STATE
P = PRIVATE
M = PUBLIC (other than federal or state)
O = OTHER (specify)

M (specify)

D. PHONE (area code & no.)

A | 804 | 453 | 4211

E. STREET OR P.O. BOX

PO Box 175

F. CITY OR TOWN

Reedville

G. STATE: VA

H. ZIP CODE:

IX. INDIAN LAND

Is the facility located on Indian lands? ☐ YES ☒ NO

X. EXISTING ENVIRONMENTAL PERMITS

A. NPDES (Discharges to Surface Water)

9 | N | VA0003867

D. PSD (Air Emissions from Proposed Sources)

9 | P | 40278

B. UIC (Underground Injection of Fluids)

9 | U |

E. OTHER (specify)

9 | VAR540298 | (specify) Storm Water

C. RCRA (Hazardous Wastes)

9 | R |

E. OTHER (specify)

9 | VAR540312 | (specify) Storm Water-Fairport

XI. MAP

Attach to this application a topographic map of the area extending to at least one mile beyond property boundaries. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers and other surface water bodies in the map area. See instructions for precise requirements.

XII. NATURE OF BUSINESS (provide a brief description)

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XIII. CERTIFICATION (see instructions)

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in the application, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME & OFFICIAL TITLE (type or print)

Lyell Jett, General Manager

B. SIGNATURE

Lyell Jett

C. DATE SIGNED

3/13/02

COMMENTS FOR OFFICIAL USE ONLY

C

EPA Form 3510-1 (3-90)

Rev-1, February 2002

ATTACHMENT D

FACILITY NAME: Omega Protein
ADDRESS: P.O. Box 125, Reedville, Va. 22539

PERMIT NO.: VA0003867 OUTFALL NO.: 001

DEQ PARAM #	EPA PARAM #	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMPLE FREQUENCY[3]	SPECIFIC TARGET VALUE[4] [5]
METALS								
		Antimony (Dis.)	(5)	(5)	<.005 mg/L	G	1/5 YR	129000 all outfalls
		Arsenic III (Dis.)	(5)	(5)	<.05 mg/L	G	1/5 YR	[001,003, 004,005, 006: 55.2] [002: 634.8]
440	01025	Cadmium (Dis.)	(5)	(5)	.008 mg/L	G	1/5 YR	[001,003, 004,005, 006: 34.4] [002: 279]
023	01032	Chromium VI	(5)	(5)	<.01 mg/L	G	1/5 YR	[001,003, 004,005, 006: 880] [002: 1500]
442	01040	Copper (Dis.)	(5)	(5)	.088 mg/L	G	1/5 YR	[001,003, 004,005, 006: 2.32] [002: 26.68]
405	01049	Lead (Dis.)	(5)	(5)	<.001 mg/L	G	1/5 YR	[001,003, 004,005, 006: 176] [002: 255]
444	71890	Mercury (Dis.)	(5)	(5)	<.0002 mg/L	G	1/5 YR	[001,002 004,005, 006: 1.0] [003: 1.68]
445	01065	Nickel (Dis.)	(5)	(5)	<.005 mg/L	G	1/5 YR	[001,003, 004,005, 006: 60] [002: 249]
446	01145	Selenium (Dis.)	(5)	(5)	<.005 mg/L	G	1/5 YR	[001,003, 004,005, 006: 240] [002: 2130]
447	01075	Silver (Dis.)	(5)	(5)	.027 mg/L	G	1/5 YR	[001,003, 004,005, 006: 1.84] [002: 21.16]
448	01092	Zinc (Dis.)	(5)	(5)	<.02 mg/L	G	1/5 YR	[001,003, 004,005, 006: 76] [002: 874]
		Manganese (Dis.)			.089 mg/L			

DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER QUALITY MONITORING
ATTACHMENT D

FACILITY NAME: Omega Protein
ADDRESS: P.O. Box 125, Reedville, Va. 22539

PERMIT NO.: VA0003867 OUTFALL NO.: 001

DEQ PARAM #	EPA PARAM #	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMPLE FREQUENCY[3]	SPECIFIC TARGET VALUE[4] ug/L
PESTICIDES/PCB'S								
332	39330	Aldrin	608	0.05	<.05 ug/L	3G	1/5 YR	NA
333	39350	Chlordane	608	0.2	<1.0 ug/L	3G	1/5 YR	NA
334	77969	Chlorpyrifos (Dursban)	622	(7)	<.1 ug/L	3G	1/5 YR	NA
		DDD	608	0.1	<.15 ug/L	3G	1/5 YR	NA
		DDE	608	0.1	<.05 ug/L	3G	1/5 YR	NA
335	39370	DDT	608	0.1	<.15 ug/L	3G	1/5 YR	NA
336	39560	Demeton	(6)	(7)	<2.0 ug/L	3G	1/5 YR	NA
337	39380	Dieldrin	608	0.1	<.05 ug/L	3G	1/5 YR	NA
		Endosulfan	608	0.1	<.15 ug/L	3G	1/5 YR	NA
339	39390	Endrin	608	0.1	<.15 ug/L	3G	1/5 YR	NA
340	39580	Guthion	622	(7)	<20 ng/L	3G	1/5 YR	NA
341	39410	Heptachlor	608	0.05	<.05 ug/L	3G	1/5 YR	NA
342	77835	Hexachlorocyclohexane (Lindane)	608	0.05	<.04 ug/L	3G	1/5 YR	NA
		Kepone	(6)	(7)	<2.0 ug/L	3G	1/5 YR	NA
343	39530	Malathion	(6)	(7)	<2.0 ug/L	3G	1/5 YR	NA
344	39480	Methoxychlor	(6)	(7)	<.40 ug/L	3G	1/5 YR	NA
345	39755	Mirex	(6)	(7)	<.10 ug/L	3G	1/5 YR	NA
641		PCB-1242	608	1.0	<1.0 ng/L	3G	1/5 YR	NA
642		PCB-1254	608	1.0	<1.0 ng/L	3G	1/5 YR	NA
643		PCB-1221	608	1.0	<1.0 ng/L	3G	1/5 YR	NA
644		PCB-1232	608	1.0	<1.0 ng/L	3G	1/5 YR	NA
645		PCB-1248	608	1.0	<1.0 ng/L	3G	1/5 YR	NA
618	39508	PCB-1260	608	1.0	<1.0 ng/L	3G	1/5 YR	NA
646		PCB-1016	608	1.0	<1.0 ng/L	3G	1/5 YR	NA

DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER QUALITY MONITORING
ATTACHMENT D

FACILITY NAME: Omega Protein
ADDRESS: P.O. Box 125, Reedville, Va. 22539

PERMIT NO.: VA0003867 OUTFALL NO.: 001

DEQ PARAM #	EPA PARAM #	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[5]	REPORTING RESULTS	SAMPLE TYPE[3]	SAMPLE FREQUENCY[3]	SPECIFIC TARGET VALUE[4] [6]
349	39400	Toxaphene	608	5.0	< 1.0 ug/L	3G	1/5 YR	NA
647		2-(2,4,5-Trichlorophenoxy) propionic acid (Silvex)	(8)	(7)	< .002 mg/L	3G	1/5 YR (PWS)	NA
		BASE NEUTRAL EXTRACTABLES						
		Acenaphthene	625	10.0	< 10.0 ug/L	3G	1/5 YR	NA
275	34222	Anthracene	625	10.0	< 10.0 ug/L	3G	1/5 YR	NA
276	34526	Benzo(a)anthracene	625	10.0	< 10.0 ug/L	3G	1/5 YR	NA
648		Benzo(b)fluoranthene	625	10.0	< 10.0 ug/L	3G	1/5 YR	NA
278	34242	Benzo(k)fluoranthene	625	10.0	< 10.0 ug/L	3G	1/5 YR	NA
277	34247	Benzo(a)pyrene	625	10.0	< 10.0 ug/L	3G	1/5 YR	NA
		Butyl benzyl phthalate	625	10.0	< 10.0 ug/L	3G	1/5 YR	NA
282	34320	Chrysene	625	10.0	< 10.0 ug/L	3G	1/5 YR	NA
654		Dibenz(a,h)anthracene	625	20.0	< 10.0 ug/L	3G	1/5 YR	NA
		Dibutyl phthalate	625	10.0	< 10.0 ug/L	3G	1/5 YR	NA
259	34536	1,2-Dichlorobenzene	625	10.0	< 10.0 ug/L	3G	1/5 YR	NA
264	34566	1,3-Dichlorobenzene	625	10.0	< 10.0 ug/L	3G	1/5 YR	NA
266	34571	1,4-Dichlorobenzene	625	10.0	< 10.0 ug/L	3G	1/5 YR	NA
		Diethyl phthalate	625	10.0	< 10.0 ug/L	3G	1/5 YR	NA
170		Di-2-Ethylhexyl Phthalate	625	10.0	< 10.0 ug/L	3G	1/5 YR	NA
239	34611	2,4-Dinitrotoluene	625	10.0	< 10.0 ug/L	3G	1/5 YR	NA
287	34376	Fluoranthene	625	10.0	< 10.0 ug/L	3G	1/5 YR	NA
288	34381	Fluorene	625	10.0	< 10.0 ug/L	3G	1/5 YR	NA
651		Indeno(1,2,3-cd)pyrene	625	20.0	< 10.0 ug/L	3G	1/5 YR	NA
650		Isophorone	625	10.0	< 10.0 ug/L	3G	1/5 YR	NA
293	34696	Naphthalene	625	10.0	< 10.0 ug/L	3G	1/5 YR	NA
295	34469	Pyrene	625	10.0	< 10.0 ug/L	3G	1/5 YR	NA
		1,2,4-Trichlorobenzene	625	10.0	< 10.0 ug/L	3G	1/5 YR	NA

DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER QUALITY MONITORING
ATTACHMENT D

FACILITY NAME: Omega Protein
ADDRESS: P.O. Box 125, Reedville, Va. 22539

PERMIT NO.: VA0003867 OUTFALL NO.: 001

DEQ PARAM #	EPA PARAM #	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMPLE FREQUENCY[3]	SPECIFIC TARGET VALUE[4] ug/L
VOLATILES								
216	34030	Benzene	624	10.0	< 5.0 ug/L	G	1/5 YR	NA
484	32104	Bromoform	624	10.0	< 5.0 ug/L	G	1/5 YR	NA
236	32102	Carbon Tetrachloride	624	10.0	< 5.0 ug/L	G	1/5 YR	NA
652		Chlorodibromomethane	624	10.0	< 5.0 ug/L	G	1/5 YR	NA
223	32106	Chloroform	624	10.0	< 5.0 ug/L	G	1/5 YR	NA
649		Dichloromethane	624	20.0	< 5.0 ug/L	G	1/5 YR	NA
244	79603	Dichlorobromomethane	624	20.0	< 5.0 ug/L	G	1/5 YR	NA
250	34531	1,2-Dichloroethane	624	10.0	< 5.0 ug/L	G	1/5 YR	NA
		1,1-Dichloroethylene	624	10.0	< 5.0 ug/L	G	1/5 YR	NA
172	34371	Ethylbenzene	624	10.0	< 5.0 ug/L	G	1/5 YR	NA
653		Monochlorobenzene	624	50.0	< 5.0 ug/L	G	1/5 YR	NA
220	34475	Tetrachloroethylene	624	10.0	< 5.0 ug/L	G	1/5 YR	NA
222	34010	Toluene	624	10.0	< 5.0 ug/L	G	1/5 YR	NA
155	39180	Trichloroethylene	624	10.0	< 5.0 ug/L	G	1/5 YR	NA
173	39175	Vinyl Chloride	624	10.0	< 10.0 ug/L	G	1/5 YR	NA
ACIDS EXTRACTABLES								
		2-Chlorophenol	625	10.0	< 10.0 ug/L	3G	1/5 YR	NA
		2,4 Dichlorophenol	625	10.0	< 10.0 ug/L	3G	1/5 YR	NA
		2,4 Dimethylphenol	625	10.0	< 10.0 ug/L	3G	1/5 YR	NA
210	39032	Pentachlorophenol	625	50.0	< 50.0 ug/L	3G	1/5 YR	NA
175	46000	Phenol[5]	625	10.0	< 10.0 ug/L	3G	1/5 YR	NA
602	34621	2,4,6-Trichlorophenol	625	10.0	< 10.0 ug/L	3G	1/5 YR	NA
MISCELLANEOUS								
039	00610	Ammonia as NH3-N	350.1	200	2.4 mg/L	C	1/5 YR	NA
005	50060	Chlorine, Total Residual	(6)	100		G	1/5 YR	NA
018	00720	Cyanide	335.2	10.0	< .01 mg/L	G	1/5 YR	NA

DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER QUALITY MONITORING
ATTACHMENT D

FACILITY NAME: Omega Protein
ADDRESS: P.O. Box 125, Reedville, Va. 22539

PERMIT NO.: VA0003867 OUTFALL NO.: 001

DEQ PARAM #	EPA PARAM #	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMPLE FREQUENCY[3]	SPECIFIC TARGET VALUE[4] ug/l
		Fecal Coliform N/CML)	(6)	(7)	1600 MPN/100 ML	G	1/5 YR	NA
137	00900	Hardness (as mg/l $CaCO_3$)	(6)	(7)	5340 mg/L	C	1/5 YR	NA
		Hydrogen Sulfide	(6)	(7)	2.5 mg/L	G	1/5 YR	NA
		Nitrate (as mg/l N)	(6)	(7)	<.1 mg/L	C	1/5 YR	NA
350	30340	Tributlytin[5]	NSB 85-3295	(7)	<.50 ug/L	C	1/5 YR if believed present by permittee	NA
252	81551	Xylenes (total)	SW 846 Method 8020	(7)	<10.0 ug/L	G	1/5 YR	NA

Graham Lyell Jett — General Manager
Name of Principal Exec. Officer or Authorized Agent / Title

Graham Lyell Jett — 3/13/02
Signature of Principal Officer or Authorized Agent / Date

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations. See 18 U.S.C. §1001 and 33 U.S.C. §1319. (Penalties under these statutes may include fines up to $10,000 and or maximum imprisonment of between 6 months and 5 years.)

DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER QUALITY MONITORING
ATTACHMENT D

FACILITY NAME: Omega Protein
ADDRESS: P.O. Box 125, Reedville, Va. 22539

PERMIT NO.: VA0003867 OUTFALL NO.: 001

DEQ PARAM #	EPA PARAM #	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMPLE FREQUENCY[3]	SPECIFIC TARGET VALUE[4] ug/l
METALS								
		Antimony (Dis.)	(5)	(5)	< .005 mg/L	G	1/5 YR	129000 all outfalls
		Arsenic III (Dis.)	(5)	(5)	< .05 mg/L	G	1/5 YR	[001,003, 004,005, 006: 55.2] [002: 634.8]
440	01025	Cadmium (Dis.)	(5)	(5)	.008 mg/L	G	1/5 YR	[001,003, 004,005, 006: 34.4] [002: 279]
023	01032	Chromium VI	(5)	(5)	< .01 mg/L	G	1/5 YR	[001,003, 004,005, 006: 880] [002: 1500]
442	01040	Copper (Dis.)	(5)	(5)	.088 mg/L	G	1/5 YR	[001,003, 004,005, 006: 2.32] [002: 26.68]
405	01049	Lead (Dis.)	(5)	(5)	< .001 mg/L	G	1/5 YR	[001,003, 004,005, 006: 176] [002: 255]
444	71890	Mercury (Dis.)	(5)	(5)	< .0002 mg/L	G	1/5 YR	[001,002 004,005, 006: 1.0] [003: 1.68]
445	01065	Nickel (Dis.)	(5)	(5)	< .005 mg/L	G	1/5 YR	[001,003, 004,005, 006: 60] [002: 249]
446	01145	Selenium (Dis.)	(5)	(5)	< .005 mg/L	G	1/5 YR	[001,003, 004,005, 006: 240] [002: 2130]
447	01075	Silver (Dis.)	(5)	(5)	.027 mg/L	G	1/5 YR	[001,003, 004,005, 006: 1.84] [002: 21.16]
448	01092	Zinc (Dis.)	(5)	(5)	< .02 mg/L	G	1/5 YR	[001,003, 004,005, 006: 76] [002: 8741
		Manganese (Dis.)			.089 mg/L			

DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER QUALITY MONITORING
ATTACHMENT D

FACILITY NAME: Omega Protein
ADDRESS: P.O. Box 125, Reedville, Va. 22539

PERMIT NO.: VA0003867 OUTFALL NO.: 001

DEQ PARAM #	EPA PARAM #	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMPLE FREQUENCY[3]	SPECIFIC TARGET VALUE[4] ug/L
PESTICIDES/PCB'S								
332	39330	Aldrin	608	0.05	<.05 ug/L	3G	1/5 YR	NA
333	39350	Chlordane	608	0.2	<1.0 ug/L	3G	1/5 YR	NA
334	77969	Chlorpyrifos (Dursban)	622	(7)	<.1 ug/L	3G	1/5 YR	NA
		DDD	608	0.1	<.15 ug/L	3G	1/5 YR	NA
		DDE	608	0.1	<.05 ug/L	3G	1/5 YR	NA
335	39370	DDT	608	0.1	<.15 ug/L	3G	1/5 YR	NA
336	39560	Demeton	(6)	(7)	<2.0 ug/L	3G	1/5 YR	NA
337	39380	Dieldrin	608	0.1	<.05 ug/L	3G	1/5 YR	NA
		Endosulfan	608	0.1	<.15 ug/L	3G	1/5 YR	NA
339	39390	Endrin	608	0.1	<.15 ug/L	3G	1/5 YR	NA
340	39580	Guthion	622	(7)	<20 mg/L	3G	1/5 YR	NA
341	39410	Heptachlor	608	0.05	<.05 ug/L	3G	1/5 YR	NA
342	77835	Hexachlorocyclohexane (Lindane)	608	0.05	<.04 ug/L	3G	1/5 YR	NA
		Kepone	(6)	(7)	<2.0 ug/L	3G	1/5 YR	NA
343	39530	Malathion	(6)	(7)	<2.0 ug/L	3G	1/5 YR	NA
344	39480	Methoxychlor	(6)	(7)	<.40 ug/L	3G	1/5 YR	NA
345	39755	Mirex	(6)	(7)	<.10 ug/L	3G	1/5 YR	NA
641		PCB-1242	608	1.0	<1.0 mg/L	3G	1/5 YR	NA
642		PCB-1254	608	1.0	<1.0 mg/L	3G	1/5 YR	NA
643		PCB-1221	608	1.0	<1.0 mg/L	3G	1/5 YR	NA
644		PCB-1232	608	1.0	<1.0 mg/L	3G	1/5 YR	NA
645		PCB-1248	608	1.0	<1.0 mg/L	3G	1/5 YR	NA
618	39508	PCB-1260	608	1.0	<1.0 mg/L	3G	1/5 YR	NA
646		PCB-1016	608	1.0	<1.0 mg/L	3G	1/5 YR	NA

DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER QUALITY MONITORING
ATTACHMENT D

FACILITY NAME: Omega Protein
ADDRESS: P.O. Box 125, Reedville, Va. 22539

PERMIT NO.: VA0003867 OUTFALL NO.: 001

DEQ PARAM #	EPA PARAM #	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[2]	REPORTING RESULTS	SAMPLE TYPE[3]	SAMPLE FREQUENCY[3]	SPECIFIC TARGET VALUE[4] [5]
349	39400	Toxaphene	608	5.0	< 1.0 ug/L	3G	1/5 YR	NA
647		2-(2,4,5-Trichlorophenoxy) propionic acid (Silvex)	(6)	(7)	< .002 ug/L	3G	1/5 YR (PWS)	NA
		BASE NEUTRAL EXTRACTABLES						
		Acenaphthene	625	10.0	< 10.0 ug/L	3G	1/5 YR	NA
275	34222	Anthracene	625	10.0	< 10.0 ug/L	3G	1/5 YR	NA
276	34526	Benzo(a)anthracene	625	10.0	< 10.0 ug/L	3G	1/5 YR	NA
648		Benzo(b)fluoranthene	625	10.0	< 10.0 ug/L	3G	1/5 YR	NA
278	34242	Benzo(k)fluoranthene	625	10.0	< 10.0 ug/L	3G	1/5 YR	NA
277	34247	Benzo(a)pyrene	625	10.0	< 10.0 ug/L	3G	1/5 YR	NA
		Butyl benzyl phthalate	625	10.0	< 10.0 ug/L	3G	1/5 YR	NA
282	34320	Chrysene	625	10.0	< 10.0 ug/L	3G	1/5 YR	NA
654		Dibenz(a,h)anthracene	625	20.0	< 10.0 ug/L	3G	1/5 YR	NA
		Dibutyl phthalate	625	10.0	< 10.0 ug/L	3G	1/5 YR	NA
259	34536	1,2-Dichlorobenzene	625	10.0	< 10.0 ug/L	3G	1/5 YR	NA
264	34566	1,3-Dichlorobenzene	625	10.0	< 10.0 ug/L	3G	1/5 YR	NA
266	34571	1,4-Dichlorobenzene	625	10.0	< 10.0 ug/L	3G	1/5 YR	NA
		Diethyl phthalate	625	10.0	< 10.0 ug/L	3G	1/5 YR	NA
170		Di-2-Ethylhexyl Phthalate	625	10.0	< 10.0 ug/L	3G	1/5 YR	NA
239	34611	2,4-Dinitrotoluene	625	10.0	< 10.0 ug/L	3G	1/5 YR	NA
287	34376	Fluoranthene	625	10.0	< 10.0 ug/L	3G	1/5 YR	NA
288	34381	Fluorene	625	10.0	< 10.0 ug/L	3G	1/5 YR	NA
651		Indeno(1,2,3-cd)pyrene	625	20.0	< 10.0 ug/L	3G	1/5 YR	NA
650		Isophorone	625	10.0	< 10.0 ug/L	3G	1/5 YR	NA
293	34696	Naphthalene	625	10.0	< 10.0 ug/L	3G	1/5 YR	NA
296	34469	Pyrene	625	10.0	< 10.0 ug/L	3G	1/5 YR	NA
		1,2,4-Trichlorobenzene	625	10.0	< 10.0 ug/L	3G	1/5 YR	NA

DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER QUALITY MONITORING
ATTACHMENT D

FACILITY NAME: Omega Protein
ADDRESS: P.O. Box 125, Reedville, Va. 22539

PERMIT NO.: VA0003867 OUTFALL NO.: 001

DEQ PARAM #	EPA PARAM #	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMPLE FREQUENCY[3]	SPECIFIC TARGET VALUE[4]
VOLATILES								
216	34030	Benzene	624	10.0	< 5.0 ug/L	G	1/5 YR	NA
484	32104	Bromoform	624	10.0	< 5.0 ug/L	G	1/5 YR	NA
236	32102	Carbon Tetrachloride	624	10.0	< 5.0 ug/L	G	1/5 YR	NA
652		Chlorodibromomethane	624	10.0	< 5.0 ug/L	G	1/5 YR	NA
223	32106	Chloroform	624	10.0	< 5.0 ug/L	G	1/5 YR	NA
649		Dichloromethane	624	20.0	< 5.0 ug/L	G	1/5 YR	NA
244	79603	Dichlorobromomethane	624	20.0	< 5.0 ug/L	G	1/5 YR	NA
230	34531	1,2-Dichloroethane	624	10.0	< 5.0 ug/L	G	1/5 YR	NA
		1,1-Dichloroethylene	624	10.0	< 5.0 ug/L	G	1/5 YR	NA
172	34371	Ethylbenzene	624	10.0	< 5.0 ug/L	G	1/5 YR	NA
653		Monochlorobenzene	624	50.0	< 5.0 ug/L	G	1/5 YR	NA
220	34475	Tetrachloroethylene	624	10.0	< 5.0 ug/L	G	1/5 YR	NA
222	34010	Toluene	624	10.0	< 5.0 ug/L	G	1/5 YR	NA
155	39180	Trichloroethylene	624	10.0	< 5.0 ug/L	G	1/5 YR	NA
173	39175	Vinyl Chloride	624	10.0	< 10.0 ug/L	G	1/5 YR	NA
ACIDS EXTRACTABLES								
		2-Chlorophenol	625	10.0	< 10.0 ug/L	3G	1/5 YR	NA
		2,4 Dichlorophenol	625	10.0	< 10.0 ug/L	3G	1/5 YR	NA
		2,4 Dimethylphenol	625	10.0	< 10.0 ug/L	3G	1/5 YR	NA
210	39032	Pentachlorophenol	625	50.0	< 50.0 ug/L	3G	1/5 YR	NA
175	46000	Phenol[5]	625	10.0	< 10.0 ug/L	3G	1/5 YR	NA
002	34621	2,4,6-Trichlorophenol	625	10.0	< 10.0 ug/L	3G	1/5 YR	NA
MISCELLANEOUS								
039	00610	Ammonia as NH3-N	350.1	200	2.4 mg/L	C	1/5 YR	NA
005	50060	Chlorine, Total Residual	(6)	100		G	1/5 YR	NA
018	00720	Cyanide	335.2	10.0	< .01 mg/L	G	1/5 YR	NA

DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER QUALITY MONITORING
ATTACHMENT D

FACILITY NAME: Omega Protein
ADDRESS: P.O. Box 125, Reedville, Va. 22539

PERMIT NO.: VA0003867 OUTFALL NO.: 001

DEQ PARAM #	EPA PARAM #	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMPLE FREQUENCY[3]	SPECIFIC TARGET VALUE[4] ug/l
		Fecal Coliform N/CML)	(6)	(7)	1600 MPN/100 ML	G	1/5 YR	NA
137	00900	Hardness (as mg/l $CaCO_3$)	(6)	(7)	5340 mg/L	C	1/5 YR	NA
		Hydrogen Sulfide	(6)	(7)	2.5 mg/L	G	1/5 YR	NA
		Nitrate (as mg/l N)	(6)	(7)	<.1 mg/L	C	1/5 YR	NA
350	30340	Tributlytin[9]	NSB 85-3295	(7)	<.50 ug/L	C	1/5 YR if believed present by permittee	NA
252	81551	Xylenes (total)	SW 846 Method 8020	(7)	<10.0 ug/L	G	1/5 YR	NA

Graham Lyell Jett — General Manager
Name of Principal Exec. Officer or Authorized Agent / Title

Graham Lyell Jett — 3/13/02
Signature of Principal Officer or Authorized Agent / Date

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations. See 18 U.S.C. §1001 and 33 U.S.C. §1319. (Penalties under these statutes may include fines up to $10,000 and or maximum imprisonment of between 6 months and 5 years.)

DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER QUALITY MONITORING
ATTACHMENT D.

FACILITY NAME: Omega Protein
ADDRESS: P.O. Box 125, Reedville, Va. 22539

PERMIT NO.: VA0003867 OUTFALL NO.: 002

DEQ PARAM #	EPA PARAM #	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMPLE FREQUENCY[3]	SPECIFIC TARGET VALUE[4] ug/l
		METALS						
		Antimony (Dis.)	(5)	(5)	<.005 mg/L	G	1/5 YR	129000 all outfalls
		Arsenic III (Dis.)	(5)	(5)	<.05 mg/L	G	1/5 YR	[001,003, 004,005, 006: 55.2] [002: 634.8]
440	01025	Cadmium (Dis.)	(5)	(5)	<.001 mg/L	G	1/5 YR	[001,003, 004,005, 006: 34.4] [002: 279]
023	01032	Chromium VI	(5)	(5)	<.01 mg/L	G	1/5 YR	[001,003, 004,005, 006: 880] [002: 1500]
442	01040	Copper (Dis.)	(5)	(5)	.008 mg/L	G	1/5 YR	[001,003, 004,005, 006: 2.32] [002: 26.68]
405	01049	Lead (Dis.)	(5)	(5)	<.001 mg/L	G	1/5 YR	[001,003, 004,005, 006: 176] [002: 255]
444	71890	Mercury (Dis.)	(5)	(5)	<.0002 mg/L	G	1/5 YR	[001,002 004,005, 006: 1.0] [003: 1.68]
445	01065	Nickel (Dis.)	(5)	(5)	<.005 mg/L	G	1/5 YR	[001,003, 004,005, 006: 60] [002: 249]
446	01145	Selenium (Dis.)	(5)	(5)	<.005 mg/L	G	1/5 YR	[001,003, 004,005, 006: 240] [002: 2130]
447	01075	Silver (Dis.)	(5)	(5)	<.001 mg/L	G	1/5 YR	[001,003, 004,005, 006: 1.84] [002: 21.16]
448	01092	Zinc (Dis.)	(5)	(5)	<.02 mg/L	G	1/5 YR	[001,003, 004,005, 006: 76] [002: 874]
		Manganese (Dis)			.008 mg/L			

DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER QUALITY MONITORING
ATTACHMENT D

FACILITY NAME: Omega Protein
ADDRESS: P.O. Box 125, Reedville, Va. 22539

PERMIT NO.: VA0003867 OUTFALL NO.: 002

DEQ PARAM #	EPA PARAM #	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMPLE FREQUENCY[3]	SPECIFIC TARGET VALUE[4] ug/l
PESTICIDES/PCB'S								
332	39330	Aldrin	608	0.05	<.05 ug/L	3G	1/5 YR	NA
333	39350	Chlordane	608	0.2	<1.0 ug/L	3G	1/5 YR	NA
334	77969	Chlorpyrifos (Dursban)	622	(7)	<.1 ug/L	3G	1/5 YR	NA
		DDD	608	0.1	<.15 ug/L	3G	1/5 YR	NA
		DDE	608	0.1	<.05 ug/L	3G	1/5 YR	NA
335	39370	DDT	608	0.1	<.15 ug/L	3G	1/5 YR	NA
336	39560	Demeton	(6)	(7)	<2.0 ug/L	3G	1/5 YR	NA
337	39380	Dieldrin	608	0.1	<.05 ug/L	3G	1/5 YR	NA
		Endosulfan	608	0.1	<.15 ug/L	3G	1/5 YR	NA
339	39390	Endrin	608	0.1	<.15 ug/L	3G	1/5 YR	NA
340	39580	Guthion	622	(7)	<20 mg/L	3G	1/5 YR	NA
341	39410	Heptachlor	608	0.05	<.05 ug/L	3G	1/5 YR	NA
342	77835	Hexachlorocyclohexane (Lindane)	608	0.05	<.04 ug/L	3G	1/5 YR	NA
		Kepone	(6)	(7)	<2.0 ug/L	3G	1/5 YR	NA
343	39530	Malathion	(6)	(7)	<2.0 ug/L	3G	1/5 YR	NA
344	39480	Methoxychlor	(6)	(7)	<.40 ug/L	3G	1/5 YR	NA
345	39755	Mirex	(6)	(7)	<.10 ug/L	3G	1/5 YR	NA
641		PCB-1242	608	1.0	<1.0 ug/L	3G	1/5 YR	NA
642		PCB-1254	608	1.0	<1.0 ug/L	3G	1/5 YR	NA
643		PCB-1221	608	1.0	<1.0 ug/L	3G	1/5 YR	NA
644		PCB-1232	608	1.0	<1.0 ug/L	3G	1/5 YR	NA
645		PCB-1248	608	1.0	<1.0 ug/L	3G	1/5 YR	NA
618	39508	PCB-1260	608	1.0	<1.0 ug/L	3G	1/5 YR	NA
646		PCB-1016	608	1.0	<1.0 ug/L	3G	1/5 YR	NA

Each outfall lists specific mg/L

DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER QUALITY MONITORING
ATTACHMENT D

FACILITY NAME: Omega Protein
ADDRESS: P.O. Box 125, Reedville, Va. 22539

PERMIT NO.: VA0003867 OUTFALL NO.: 002

DEQ PARAM #	EPA PARAM #	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMPLE FREQUENCY[3]	SPECIFIC TARGET VALUE[4] ug/L
349	39400	Toxaphene	608	5.0	<1.0 ug/L	3G	1/5 YR	NA
647		2-(2,4,5-Trichlorophenoxy) propionic acid (Silvex)	(6)	(7)	<.002 mg/L	3G	1/5 YR (PWS)	NA
		BASE NEUTRAL EXTRACTABLES						
		Acenaphthene	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
275	34222	Anthracene	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
276	34526	Benzo(a)anthracene	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
648		Benzo(b)fluoranthene	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
278	34242	Benzo(k)fluoranthene	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
277	34247	Benzo(a)pyrene	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
		Butyl benzyl phthalate	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
282	34320	Chrysene	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
654		Dibenz(a,h)anthracene	625	20.0	<10.0 ug/L	3G	1/5 YR	NA
		Dibutyl phthalate	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
259	34536	1,2-Dichlorobenzene	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
264	34566	1,3-Dichlorobenzene	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
266	34571	1,4-Dichlorobenzene	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
		Diethyl phthalate	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
170		Di-2-Ethylhexyl Phthalate	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
239	34611	2,4-Dinitrotoluene	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
287	34376	Fluoranthene	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
288	34381	Fluorene	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
651		Indeno(1,2,3-cd)pyrene	625	20.0	<10.0 ug/L	3G	1/5 YR	NA
650		Isophorone	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
293	34696	Naphthalene	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
296	34469	Pyrene	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
		1,2,4-Trichlorobenzene	625	10.0	<10.0 ug/L	3G	1/5 YR	NA

DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER QUALITY MONITORING
ATTACHMENT D

FACILITY NAME: Omega Protein
ADDRESS: P.O. Box 125, Reedville, Va. 22539

PERMIT NO.: VA0003867 OUTFALL NO.: 002

DEQ PARAM #	EPA PARAM #	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMPLE FREQUENCY[3]	SPECIFIC TARGET VALUE[4] ug/L
VOLATILES								
216	34030	Benzene	624	10.0	< 5.0 ug/L	G	1/5 YR	NA
484	32104	Bromoform	624	10.0	< 5.0 ug/L	G	1/5 YR	NA
236	32102	Carbon Tetrachloride	624	10.0	< 5.0 ug/L	G	1/5 YR	NA
652		Chlorodibromomethane	624	10.0	< 5.0 ug/L	G	1/5 YR	NA
223	32106	Chloroform	624	10.0	< 5.0 ug/L	G	1/5 YR	NA
649		Dichloromethane	624	20.0	< 5.0 ug/L	G	1/5 YR	NA
244	79603	Dichlorobromomethane	624	20.0	< 5.0 ug/L	G	1/5 YR	NA
260	34531	1,2-Dichloroethane	624	10.0	< 5.0 ug/L	G	1/5 YR	NA
		1,1-Dichloroethylene	624	10.0	< 5.0 ug/L	G	1/5 YR	NA
172	34371	Ethylbenzene	624	10.0	< 5.0 ug/L	G	1/5 YR	NA
653		Monochlorobenzene	624	50.0	< 5.0 ug/L	G	1/5 YR	NA
220	34475	Tetrachloroethylene	624	10.0	< 5.0 ug/L	G	1/5 YR	NA
222	34010	Toluene	624	10.0	< 5.0 ug/L	G	1/5 YR	NA
155	39180	Trichloroethylene	624	10.0	< 5.0 ug/L	G	1/5 YR	NA
173	39175	Vinyl Chloride	624	10.0	< 10.0 ug/L	G	1/5 YR	NA
ACIDS EXTRACTABLES								
		2-Chlorophenol	625	10.0	< 10.0 ug/L	3G	1/5 YR	NA
		2,4 Dichlorophenol	625	10.0	< 10.0 ug/L	3G	1/5 YR	NA
		2,4 Dimethylphenol	625	10.0	< 10.0 ug/L	3G	1/5 YR	NA
210	39032	Pentachlorophenol	625	50.0	< 50.0 ug/L	3G	1/5 YR	NA
175	46000	Phenol[5]	625	10.0	< 10.0 ug/L	3G	1/5 YR	NA
602	34621	2,4,6-Trichlorophenol	625	10.0	< 10.0 ug/L	3G	1/5 YR	NA
MISCELLANEOUS								
039	00610	Ammonia as NH3-N	350.1	200	48.3 mg/L	C	1/5 YR	NA
005	50060	Chlorine, Total Residual	(6)	100		G	1/5 YR	NA
018	00720	Cyanide	335.2	10.0	< .01 mg/L	G	1/5 YR	NA

DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER QUALITY MONITORING
ATTACHMENT D

FACILITY NAME: Omega Protein
ADDRESS: P.O. Box 125, Reedville, Va. 22539

PERMIT NO.: VA0003867 OUTFALL NO.: 002

DEQ PARAM #	EPA PARAM #	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMPLE FREQUENCY[3]	SPECIFIC TARGET VALUE[4] ug/l
		Fecal Coliform N/CML)	(6)	(7)	500 MPN/100 ML	G	1/5 YR	NA
137	00900	Hardness (as mg/l $CaCO_3$)	(6)	(7)	10 mg/L	C	1/5 YR	NA
		Hydrogen Sulfide	(6)	(7)	<1.0 mg/L	G	1/5 YR	NA
		Nitrate (as mg/l N)	(6)	(7)	19.1 mg/L	C	1/5 YR	NA
350	30340	Tributlytin[9]	NSB 85-3295	(7)	<.50 ug/L	C	1/5 YR if believed present by permittee	NA
252	81551	Xylenes (total)	SW 846 Method 8020	(7)	<.10 ug/L	G	1/5 YR	NA

Graham Lyell Jett — General Manager
Name of Principal Exec. Officer or Authorized Agent / Title

Graham Lyell Jett — 3/13/02
Signature of Principal Officer or Authorized Agent / Date

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations. See 18 U.S.C. §1001 and 33 U.S.C. §1319. (Penalties under these statutes may include fines up to $10,000 and or maximum imprisonment of between 6 months and 5 years.)

DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER QUALITY MONITORING
ATTACHMENT D

FACILITY NAME: Omega Protein
ADDRESS: P.O. Box 125, Reedville, Va. 22539

PERMIT NO.: VA0003867 OUTFALL NO.: 002

DEQ PAR-AM #	EPA PAR-AM #	CHEMICAL	EPA ANAL-YSIS NO.	QUANTIFI-CATION LEVEL[1]	REPORT-ING RESULTS	SAM-PLE TYPE[2]	SAMPLE FRE-QUENCY[3]	SPECIFIC TARGET VALUE[4]
		METALS						
		Antimony (Dis.)	(5)	(5)	<.005 mg/L	G	1/5 YR	129000 all outfalls
		Arsenic III (Dis.)	(5)	(5)	<.05 mg/L	G	1/5 YR	[001,003, 004,005, 006: 55.2] [002: 634.8]
440	01025	Cadmium (Dis.)	(5)	(5)	<.001 mg/L	G	1/5 YR	[001,003, 004,005, 006: 34.4] [002: 279]
023	01032	Chromium VI	(5)	(5)	<.01 mg/L	G	1/5 YR	[001,003, 004,005, 006: 680] [002: 1500]
442	01040	Copper (Dis.)	(5)	(5)	.008 mg/L	G	1/5 YR	[001,003, 004,005, 006: 2.32] [002: 26.68]
405	01049	Lead (Dis.)	(5)	(5)	<.001 mg/L	G	1/5 YR	[001,003, 004,005, 006: 176] [002: 255]
444	71890	Mercury (Dis.)	(5)	(5)	<.0002 mg/L	G	1/5 YR	[001,002 004,005, 006: 1.0] [003: 1.68]
445	01065	Nickel (Dis.)	(5)	(5)	<.005 mg/L	G	1/5 YR	[001,003, 004,005, 006: 60] [002: 249]
446	01145	Selenium (Dis.)	(5)	(5)	<.005 mg/L	G	1/5 YR	[001,003, 004,005, 006: 240] [002: 2130]
447	01075	Silver (Dis.)	(5)	(5)	<.001 mg/L	G	1/5 YR	[001,003, 004,005, 006: 1.64] [002: 21.16]
448	01092	Zinc (Dis.)	(5)	(5)	<.02 mg/L	G	1/5 YR	[001,003, 004,005, 006: 76] [002: 874]
		Manganese (Dis.)						

DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER QUALITY MONITORING
ATTACHMENT D

FACILITY NAME: Omega Protein
ADDRESS: P.O. Box 125, Reedville, Va. 22539

PERMIT NO.: VA0003867 OUTFALL NO.: 002

DEQ PARAM #	EPA PARAM #	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMPLE FREQUENCY[3]	SPECIFIC TARGET VALUE[4] ug/l
PESTICIDES/PCB'S								
332	39330	Aldrin	608	0.05	<.05 ug/L	3G	1/5 YR	NA
333	39350	Chlordane	608	0.2	<1.0 ug/L	3G	1/5 YR	NA
334	77969	Chlorpyrifos (Dursban)	622	(7)	<.1 ug/L	3G	1/5 YR	NA
		DDD	608	0.1	<.15 ug/L	3G	1/5 YR	NA
		DDE	608	0.1	<.05 ug/L	3G	1/5 YR	NA
335	39370	DDT	608	0.1	<.15 ug/L	3G	1/5 YR	NA
336	39560	Demeton	(6)	(7)	<2.0 ug/L	3G	1/5 YR	NA
337	39380	Dieldrin	608	0.1	<.05 ug/L	3G	1/5 YR	NA
		Endosulfan	608	0.1	<.15 ug/L	3G	1/5 YR	NA
339	39390	Endrin	608	0.1	<.15 ug/L	3G	1/5 YR	NA
340	39580	Guthion	622	(7)	<20 mg/L	3G	1/5 YR	NA
341	39410	Heptachlor	608	0.05	<.05 ug/L	3G	1/5 YR	NA
342	77835	Hexachlorocyclohexane (Lindane)	608	0.05	<.04 ug/L	3G	1/5 YR	NA
		Kepone	(6)	(7)	<2.0 ug/L	3G	1/5 YR	NA
343	39530	Malathion	(6)	(7)	<2.0 ug/L	3G	1/5 YR	NA
344	39480	Methoxychlor	(6)	(7)	<.40 ug/L	3G	1/5 YR	NA
345	39755	Mirex	(6)	(7)	<.10 ug/L	3G	1/5 YR	NA
641		PCB-1242	608	1.0	<1.0 ug/L	3G	1/5 YR	NA
642		PCB-1254	608	1.0	<1.0 ug/L	3G	1/5 YR	NA
643		PCB-1221	608	1.0	<1.0 ug/L	3G	1/5 YR	NA
644		PCB-1232	608	1.0	<1.0 ug/L	3G	1/5 YR	NA
645		PCB-1248	608	1.0	<1.0 ug/L	3G	1/5 YR	NA
618	39508	PCB-1260	608	1.0	<1.0 ug/L	3G	1/5 YR	NA
646		PCB-1016	608	1.0	<1.0 ug/L	3G	1/5 YR	NA

DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER QUALITY MONITORING
ATTACHMENT D

FACILITY NAME: Omega Protein
ADDRESS: P.O. Box 125, Reedville, Va. 22539

PERMIT NO.: VA0003867 OUTFALL NO.: 002

DEQ PARAM #	EPA PARAM #	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMPLE FREQUENCY[3]	SPECIFIC TARGET VALUE[4] ug/L
349	39400	Toxaphene	608	5.0	<1.0 ug/L	3G	1/5 YR	NA
647		2-(2,4,5-Trichlorophenoxy) propionic acid (Silvex)	(6)	(7)	<.002 mg/L	3G	1/5 YR (PWS)	NA
		BASE NEUTRAL EXTRACTABLES						
		Acenaphthene	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
275	34222	Anthracene	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
276	34526	Benzo(a)anthracene	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
648		Benzo(b)fluoranthene	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
278	34242	Benzo(k)fluoranthene	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
277	34247	Benzo(a)pyrene	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
		Butyl benzyl phthalate	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
282	34320	Chrysene	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
654		Dibenz(a,h)anthracene	625	20.0	<10.0 ug/L	3G	1/5 YR	NA
		Dibutyl phthalate	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
259	34536	1,2-Dichlorobenzene	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
264	34566	1,3-Dichlorobenzene	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
266	34571	1,4-Dichlorobenzene	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
		Diethyl phthalate	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
170		Di-2-Ethylhexyl Phthalate	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
239	34611	2,4-Dinitrotoluene	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
287	34376	Fluoranthene	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
288	34381	Fluorene	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
651		Indeno(1,2,3-cd)pyrene	625	20.0	<10.0 ug/L	3G	1/5 YR	NA
650		Isophorone	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
293	34696	Naphthalene	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
296	34469	Pyrene	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
		1,2,4-Trichlorobenzene	625	10.0	<10.0 ug/L	3G	1/5 YR	NA

DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER QUALITY MONITORING
ATTACHMENT D

FACILITY NAME: Omega Protein
ADDRESS: P.O. Box 125, Reedville, Va. 22539

PERMIT NO.: VA0003867 OUTFALL NO.: 002

DEQ PARAM #	EPA PARAM #	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMPLE FREQUENCY[3]	SPECIFIC TARGET VALUE[4] ug/l
VOLATILES								
216	34030	Benzene	624	10.0	< 5.0 ug/L	G	1/5 YR	NA
484	32104	Bromoform	624	10.0	< 5.0 ug/L	G	1/5 YR	NA
236	32102	Carbon Tetrachloride	624	10.0	< 5.0 ug/L	G	1/5 YR	NA
652		Chlorodibromomethane	624	10.0	< 5.0 ug/L	G	1/5 YR	NA
223	32106	Chloroform	624	10.0	< 5.0 ug/L	G	1/5 YR	NA
649		Dichloromethane	624	20.0	< 5.0 ug/L	G	1/5 YR	NA
244	79603	Dichlorobromomethane	624	20.0	< 5.0 ug/L	G	1/5 YR	NA
260	34531	1,2-Dichloroethane	624	10.0	< 5.0 ug/L	G	1/5 YR	NA
		1,1-Dichloroethylene	624	10.0	< 5.0 ug/L	G	1/5 YR	NA
172	34371	Ethylbenzene	624	10.0	< 5.0 ug/L	G	1/5 YR	NA
653		Monochlorobenzene	624	50.0	< 5.0 ug/L	G	1/5 YR	NA
220	34475	Tetrachloroethylene	624	10.0	< 5.0 ug/L	G	1/5 YR	NA
222	34010	Toluene	624	10.0	< 5.0 ug/L	G	1/5 YR	NA
155	39180	Trichloroethylene	624	10.0	< 5.0 ug/L	G	1/5 YR	NA
173	39175	Vinyl Chloride	624	10.0	< 10.0 ug/L	G	1/5 YR	NA
ACIDS EXTRACTABLES								
		2-Chlorophenol	625	10.0	< 10.0 ug/L	3G	1/5 YR	NA
		2,4 Dichlorophenol	625	10.0	< 10.0 ug/L	3G	1/5 YR	NA
		2,4 Dimethylphenol	625	10.0	< 10.0 ug/L	3G	1/5 YR	NA
210	39032	Pentachlorophenol	625	50.0	< 50.0 ug/L	3G	1/5 YR	NA
175	46000	Phenol[8]	625	10.0	< 10.0 ug/L	3G	1/5 YR	NA
602	34621	2,4,6-Trichlorophenol	625	10.0	< 10.0 ug/L	3G	1/5 YR	NA
MISCELLANEOUS								
039	00610	Ammonia as NH3-N	350.1	200	48.3 mg/L	C	1/5 YR	NA
005	50060	Chlorine, Total Residual	(6)	100		G	1/5 YR	NA
018	00720	Cyanide	335.2	10.0	< .01 mg/L	G	1/5 YR	NA

DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER QUALITY MONITORING
ATTACHMENT D

FACILITY NAME: Omega Protein
ADDRESS: P.O. Box 125, Reedville, Va. 22539

PERMIT NO.: VA0003867 OUTFALL NO.: 002

DEQ PARAM #	EPA PARAM #	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMPLE FREQUENCY[3]	SPECIFIC TARGET VALUE[4] ug/l
		Fecal Coliform N/CML)	(6)	(7)	500 MPN/100 ML	G	1/5 YR	NA
137	00900	Hardness (as mg/l $CaCO_3$)	(6)	(7)	10 mg/L	C	1/5 YR	NA
		Hydrogen Sulfide	(6)	(7)	<1.0 mg/L	G	1/5 YR	NA
		Nitrate (as mg/l N)	(6)	(7)	19.1 mg/L	C	1/5 YR	NA
350	30340	Tributlytin[5]	NSB 85-3295	(7)	<.50 ug/L	C	1/5 YR if believed present by permittee	NA
252	81551	Xylenes (total)	SW 846 Method 8020	(7)	<.10 ug/L	G	1/5 YR	NA

Graham Lyell Jett — General Manager
Name of Principal Exec. Officer or Authorized Agent / Title

Graham Lyell Jett — 3/13/02
Signature of Principal Officer or Authorized Agent / Date

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations. See 18 U.S.C. §1001 and 33 U.S.C. §1319. (Penalties under these statutes may include fines up to $10,000 and or maximum imprisonment of between 6 months and 5 years.)

Omega Protein--Reedville
Cockrell Creek Sampling Results for Cyanide

Date	Omega Intake Scrubbers	Reedville End of Mainstreet	Between Omega & Ampro	Type of Sample
5/9/02	0.02			
8/12/02	BDL	BDL	BDL	water
8/13/02	0.1			sludge
8/19/02		0.01	0.03	water
8/26/02		0.02	0.03	water
9/3/02		0.44	0.79	water
9/9/02		BDL	BDL	water
9/16/02		BDL	BDL	water

Notes: 1) Sampling is performed on Mondays in an effort to remove any influence of the discharge from Omega's processing. Omega usually completes processing for the week on Saturdays. Thus, by Monday, the Creek would have had two days to flush itself out by tidal action without any Omega discharges.
2) The sample taken on Tuesday September 3 was the day after Labor day (Omega did not fish on Labor Day)--there likely was a lot of boat traffic on Cockrell Creek on Labor Day that might have agitated the bottom sludges.

TOXICITY TESTS
FOR
OMEGA PROTEIN

Submitted to:

Mr. Lyell Jett
Omega Protein
P.O. Box 175
Reedville, VA 22539

Prepared by:

Biological Monitoring, Inc.
1800 Kraft Drive, Suite 101
Blacksburg, VA 24060

Phone: 540-953-2821
Fax: 540-951-1481
www.biomon.com

August 5, 2002

The following data have been internally reviewed and the personnel meticulously followed the methods. The procedures are deemed to be compliant with the methods and acceptable for reporting.

Anthony Smith (Laboratory Manager)

BIOLOGICAL MONITORING, INC.
Toxicity Test Condition Summary

Client: Omega Protein — Prepared by: Anthony Smith

NPDES Permit #: VA0003867

Experiment ID#: OMP072402-2

Test Organism: Mysidopsis bahia

Test Type: Static Acute

Organism Age at Start of Test: 3 d

Sample Tested: Outfall 002

Sample Type: Composite

Sample Collection Frequency and Dates and Times: From 07/22/02 @ 0700 to 07/23/02 @ 0700

Sample Collector: J.R. Hall — Delivered by: UPS

Test Solution Renewal Frequency: N/A

Dilution Water Used: Synthetic Seawater 072302

Test Temperature: 25 ± 1°C

No. of Replicates per conc.: 4 — No. of Organisms per Replicate: 5

Feeding prior to test: Normal — Feeding Regime: 2x daily

Chamber Size: 800 mL PP — Test Volume: 400 mL

Photo Period: 16h light/8h dark — Test Duration: 48 h

Start of Test: Date: 07/24/02 — Time: 1535

End of Test: Date: 07/26/02 — Time: 1522

Equipment:

pH Meter: SA 720 (A)
DO Meter: YSI 58 (b)
SCT Meter:YSI 33 (A)
°C Measurement: Calibrated Thermometer
Salinity: SCT Meter
Chlorine: Fisher/Porter Amperometric Titrator

Test Method Reference: U.S. EPA. 1993. Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms. EPA/600/4-90/027F.

BIOLOGICAL MONITORING, INC.

TOXICITY TEST DATA SHEET

Experiment I.D. #: OMP072402-2 NPDES#: VA 000 3867 Client: Omega Protein Outfall/Station No.: 002

Effluent/Sample: OMP072402-1 Sample Container: PE Project Scientist: A. Timpano QC Officer:

Sample Type:
Grab: ✓ AS
Collection Date: 7/23/02 Time: 0845 AS
Composite: ✓
Collected From: Date: 7/24/02 Time: 0700
Collected To: Date: 7/25/02 Time: 0730

Test Organism:
Species: *Mysidopsis bahia*
Source: ABS
Batch#: ABS 072102
Age: 3d
No. of organisms/ con.: 20

Test Mode: Static Acute Test Duration: 48h
Test Start Date: 7/24/02 Time: 1535
Test End Date: 7/26/02 Time: 1520
Test Temperature: 25±1°C Waterbath/Shelf#: 1/1
Dilution Water Used: SS072302 Temp. of Org. Stock Solution: 25°C

Con. % or mg/L	Test Cont. #	Number of Live Organisms					Dissolved Oxygen (mg/L)					pH					Salinity 0/00					Temperature (°C)				
		0	24	48	72	96	0	24	48	72	96	0	24	48	72	96	0	24	48	72	96	0	24	48	72	96
0	A	5	5	5			6.6	5.6	5.6			7.9	7.9	7.8			25	24	25			26	26	26		
	B	5	5	5																						
	C	5	5	5																		26	AS			
	D	5	5	5																						
100	A	5	4	4			6.8	5.6	5.6			8.3	8.1	8.0			25	25	25			26	26	26		
	B	5	5	5																						
	C	5	5	5																		26	AS			
	D	5	5	5																						
Recorded By:		AJ	AJ	BA			AJ	AJ	BA			AJ	AJ	BA			AJ	AJ	BA			AJ	AJ	BA		

BIOLOGICAL MONITORING, INC.
Toxicity Test Procedure Check Sheet

Page _____ of _____

Test I.D. #: OMP 072402-2 Test containers used: PP

No. of replicates per concentration: 4

Are all test chambers properly labeled? yes

Specify vessel type and volume used to measure and deliver effluent and diluent to test chambers:

graduated cylinder (s): 2000 pipet (s): _____

volumetric flask (s): _____ other _____

Specify below no. milliliters (mLs) of diluent and effluent measured out per concentration in this test:

Concentration (%) mg/L Other	Diluent	Effluent	Total
0	1700	0	1700
100	0	1700	1700

Specify material (s) used to place test organisms into test chambers: wide bore pipet

Total Chlorine of sample upon arrival (mg/L): <0.01

Total Chlorine of sample after dechlorination (mg/L): NA

Pretest treatment for organisms: Normal

Exposure Chamber
Total vessel capacity: 800mL
Test solution volume: 400mL
Water Depth Constant: ✓
Cyclic: _____

Feeding schedule
Pretest feeding: _____
Not fed: _____
Fed daily: 2x
Fed irregularly (describe) _____
Type of food: live rinsed artemia

Aeration
Pretest: _____
None: ✓
Slow: _____ (bubbles/min)
Moderate: _____
Vigorous: _____
Beginning: _____ (hour)

Screened Animal Enclosures
Not used: ✓
Used: _____
Photoperiod:
8h/16h: ✓
Other: _____

Conditions of surviving organisms at end of test: Normal

Methods of randomization employed: Random #

Comments: Organisms @ 27 ppt upon arrival
Salinated Sample to 25 ppt

BIOLOGICAL MONITORING, INC. № 11179
LABORATORY WORK ORDER

Project Manager: A. Smith Date: 7/17/02

Assigned to: _____ Test Start Date: 7/24/02

Client: Omega Protein Client's P.O.#: _____

Test ID#: OMP 072402-2 BMI Project #: 3273

Test Description: SAMs Test Prefix: OMP

Test Conditions (Circle Appropriate Choice)

(Acute)/Chronic

Organism: P.p., D.p., D.m., C.d., M.b, C.v., H.a., Ct Toxicant: Outfall 002
Other: _____ Permit No.#: VA 0003867

Duration: 24h, 48h, 96h, 7d, 3 brood Test Vol: 400 ml
Renew at: 24h, 48h, 96h, daily, none, Chamber: 500 ml

Concentrations: [0, 6.25, 12.5, 25, 50, 100%] IWC: _____
Other: 0, 100

Replicates: 1, 2, 3, 4, 8, 10 Other: _____
Diluent: MHRW, Surface, Synthetic Seawater

Temperature: 12 ± 1°C, 20 ± 1°C, 23 ± 1°C, 25 ± 1°C
Test Salinity: Freshwater, 13 ppt, 20 ppt

Feeding: 1 x daily, 2 x daily, 3 x daily, none, as specified _____

Dechlorination Sample: Yes/No (Circle One)
pH Adjustment to be done: Yes/No/IF necessary

Extra Controls: _____

Special Conditions: Concurrent SRT / Salinity sample if necessary

Comments: _____

OMP072402-2
File: omp072402 Transform: ARC SINE(SQUARE ROOT(Y))

Shapiro - Wilk's test for normality

D = 0.043

W = 0.706

Critical W (P = 0.05) (n = 8) = 0.818
Critical W (P = 0.01) (n = 8) = 0.749

Data FAIL normality test. Try another transformation.

Warning - The F-test of homogeneity is sensitive to non-normal data and should not be performed.

TITLE: OMP072402-2
FILE: omp072402
TRANSFORM: NO TRANSFORM NUMBER OF GROUPS: 2

GRP	IDENTIFICATION	REP	VALUE	TRANS VALUE
1	0	1	1.0000	1.0000
1	0	2	1.0000	1.0000
1	0	3	1.0000	1.0000
1	0	4	1.0000	1.0000
2	100	1	0.8000	0.8000
2	100	2	1.0000	1.0000
2	100	3	1.0000	1.0000
2	100	4	1.0000	1.0000

OMP072402-2
File: omp072402 Transform: NO TRANSFORM

SUMMARY STATISTICS ON TRANSFORMED DATA TABLE 1 of 2

GRP	IDENTIFICATION	N	MIN	MAX	MEAN
1	0	4	1.000	1.000	1.000
2	100	4	0.800	1.000	0.950

OMP072402-2
File: omp072402 Transform: NO TRANSFORM

SUMMARY STATISTICS ON TRANSFORMED DATA TABLE 2 of 2

GRP	IDENTIFICATION	VARIANCE	SD	SEM	C.V. %
1	0	0.000	0.000	0.000	0.00
2	100	0.010	0.100	0.050	10.53

OMP072402-2
File: omp072402 Transform: NO TRANSFORM

STEEL'S MANY-ONE RANK TEST - Ho:Control<Treatment

GROUP	IDENTIFICATION	TRANSFORMED MEAN	RANK SUM	CRIT. VALUE	df	SIG
1	0	1.000				
2	100	0.950	16.00	11.00	4.00	

Critical values use k = 1, are 1 tailed, and alpha = 0.05

SAMPLE COLLECTION ...

To be completed by the person collecting the sample. See reverse side for instructions.

1. Client name Omega Protein
2. Sampler's name J. R. Hall
3. Sample source Lagoon Discharge
4. Outfall/station 002
5. Purchase order no. ____
6. Affiliation ____
7. ~~NPDES permit~~ no./County Northumberland Co
8. Test period for which data is being submitted:
9. Sample relinquished by: John Attore / 7-23-02 Date; Received by: Anthony D. Timpano / 7/24/02 Date;
Sample relinquished by: ____ / ____ Date; Received by: ____ / ____ Date.

Description of Sampling Methods and Equipment

10. Type of sample collected:
Grab ____
Date collected ____
Time collected ____
Volume ____
Composite ✓
Composite type Continous
Collection period: from 7-22-02 (date) 7 am (time) to 7-23-02 (date) 7 am (time)

11. Flow during sampling 41,600
12. Type of container 1-gal. plastic
13. Number of containers shipped 1
14. No. of subsamples ____
15. Frequency ____
16. Volume ____

Condition of Effluent at Time of Collection

17. pH 8.41 18. Chlorine ____
19. Temperature:
At collection point ____
In collection device (comp. sample must be @ or below 4°C) 4°C
20. Is the sample:
Chlorinated ____
Dechlorinated ____
Unknown ____
Dechlorination method ____

Shipping Information

21. Method of shipment UPS 22. Date shipped 7-23-02 23. Time Approx 2:pm
24. Was the sample packed with ice for shipment? yes
25. *Custody seal in place by* John A. Hall *Date* 7-23-02 *Time* 11:00 am

Instructions to Lab

26. Type of test(s) to be performed ____
27. Should BMI dechlorinate the sample (Yes or No) ____ 28. Should ammonia be measured? (Yes or No) ____
29. Comments ____

30. I certify that the above information is correct John Attore (Signature) 7-23-02 (Date)

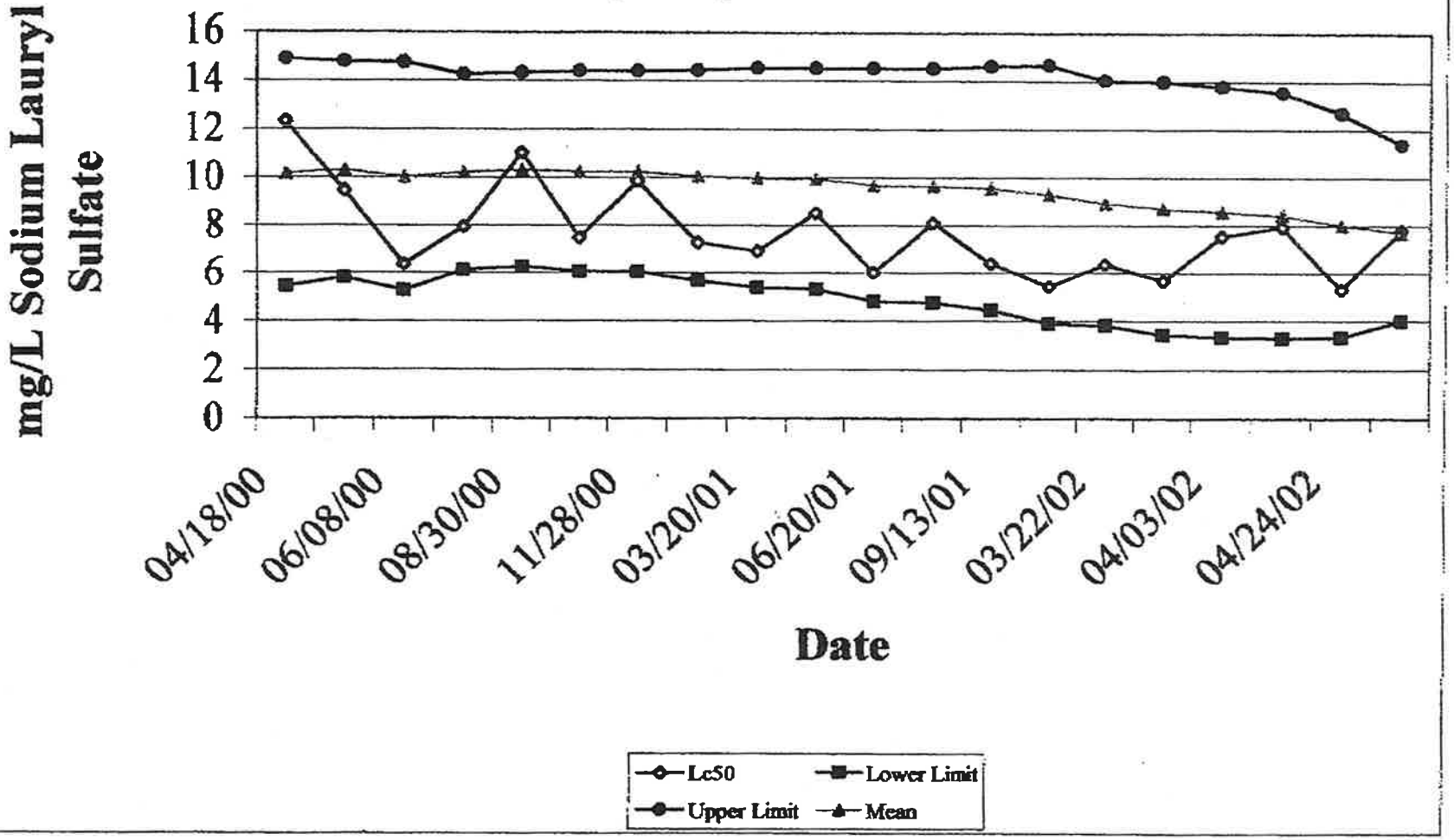
For BMI Use Only

Alk U/A
Hard U/A
BMI Sample ID# OMP072402-? Received by A. Timpano Date 7/24/02 Time 1155
Upon arrival at BMI: Custody seal ✓ Temperature 2°C pH 8.4 Chlorine <0.01 DO 9.0
On ice? ✓ Salinity 20 ppt Conductivity 16000
Visual description Clear Sample refrigerated yes
Test ID number(s) OMP072402-2

C:/wpdocs/labforms/... (V.11/04)

BMI Reference Toxicant Chart

Acute *Mysidopsis bahia*



BIOLOGICAL MONITORING, INC.
1800 Kraft Drive, Suite 101 • Blacksburg, VA 24060 • Tel 540-953-2821 • Fax 540-951-1481
Visit Our Website: www.biomon.com

This Transmission Is Confidential

FACSIMILE TRANSMITTAL SHEET

To: Denise Mosca **From:** Anthony Smith

Company: DEQ **Date:** 8/23/04

Phone Number: **Pages (Inc. Cover):**

Fax Number: 804 435-0485 **RE:**

☐ **Urgent** ☐ **For Review** ☐ **Please Reply** ☐ **Hard Copy To Follow**

COMMENTS:

Omega Report

BIOLOGICAL MONITORING, INC.

TOXICITY TEST DATA SHEET

Experiment I.D. #: OMP072402-2 NPDES#: VA 000 3867 Client: Omega Protein Outfall/Station No.: 002

Effluent/Sample: OMP072402-1 Sample Container: PE Project Scientist: A. Timpano QC Officer:

Sample Type:
Grab: ✓ AS
Collection Date: 7/23/02 Time: ~~0825~~ AS
Composite: ✓
Collected From: Date: 7/22/02 Time: 0700
Collected To: Date: 7/23/02 Time: 0700

Test Organism:
Species: *Mysidopsis bahia*
Source: ABS
Batch#: ABS 072102
Age: 3d
No. of organisms/ con. 20

Test Mode: Static Acute Test Duration: 48h
Test Start Date: 7/24/02 Time: 1535
Test End Date: 7/26/02 Time: 1532
Test Temperature: 25±1°C Waterbath/Shelf#: 1/E
Dilution Water Used: SS072302 Temp. of Org. Stock Solution: 25°C

Con. (%) or mg/L	Test Cont. #	Number of Live Organisms					Dissolved Oxygen (mg/L)					pH					Salinity 0/00					Temperature (°C)				
		0	24	48	72	96	0	24	48	72	96	0	24	48	72	96	0	24	48	72	96	0	24	48	72	96
0	A	5	5	5			6.2	5.6	5.6			7.9	7.9	7.8			25	24	25			26	26	26		
	B	5	5	5																			AS			
	C	5	5	5																		26				
	D	5	5	5																						
100	A	5	4	4			6.9	5.6	5.6			8.3	8.1	8.0			25	25	25			26	26	26		
	B	5	5	5																						
	C	5	5	5																		26	AS			
	D	5	5	5																						
Recorded By:		AJ	AS	BA			AJ	AS	BA			AJ	AS	BA			AJ	AS	BA			AJ	AS	BA		

BIOLOGICAL MONITORING, INC.
Toxicity Test Condition Summary

Client: Omega Protein — Prepared by: Anthony Smith

NPDES Permit #: VA0003867

Experiment ID#: OMP072402-2

Test Organism: Mysidopsis bahia

Test Type: Static Acute

Organism Age at Start of Test: 3 d

Sample Tested: Outfall 002

Sample Type: Composite

Sample Collection Frequency and Dates and Times: From 07/22/02 @ 0700 to 07/23/02 @ 0700

Sample Collector: J.R. Hall — Delivered by: UPS

Test Solution Renewal Frequency: N/A

Dilution Water Used: Synthetic Seawater 072302

Test Temperature: 25 ± 1°C

No. of Replicates per conc.: 4 — No. of Organisms per Replicate: 5

Feeding prior to test: Normal — Feeding Regime: 2x daily

Chamber Size: 800 mL PP — Test Volume: 400 mL

Photo Period: 16h light/8h dark — Test Duration: 48 h

Start of Test: Date: 07/24/02 — Time: 1535

End of Test: Date: 07/26/02 — Time: 1522

Equipment:

pH Meter: SA 720 (A)
DO Meter: YSI 58 (b)
SCT Meter: YSI 33 (A)
°C Measurement: Calibrated Thermometer
Salinity: SCT Meter
Chlorine: Fisher/Porter Amperometric Titrator

Test Method Reference: U.S. EPA. 1993. Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms. EPA/600/4-90/027F.

ATTACHMENT C
DEPARTMENT OF ENVIRONMENTAL QUALITY
BMP Compliance Report

Facility Name: Omega Protein
Address: Reedville, Va.

VPDES Permit No.: VA0003867

Report Period: From 6/9/02 To 6/15/02

Paint Area	COMPLIANCE (check as appropriate)	NONCOMPLIANCE *
	✓	

*Comments on Noncompliance

Name of Principal Exec. Officer or Authorized Agent / Title

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. See 18 U.S.C. paragraph 1001 and 33 U.S.C. paragraph 1319. (Penalties under these statutes may include fines up to $10,000 and or maximum imprisonment of between 6 months and 5 years).

Graham Lyell Jett 7-4-02

Signature of Principal Officer or Authorized Agent / Date

TOXICITY TESTS
FOR
OMEGA PROTEIN

Submitted to:

Mr. Lyell Jett
Omega Protein
P.O. Box 175
Reedville, VA 22539

Prepared by:

Biological Monitoring, Inc.
1800 Kraft Drive, Suite 101
Blacksburg, VA 24060

Phone: 540-953-2821
Fax: 540-951-1481
www.biomon.com

August 5, 2002

The following data have been internally reviewed and the personnel meticulously followed the methods. The procedures are deemed to be compliant with the methods and acceptable for reporting.

Anthony Smith (Laboratory Manager)

SAMPLE COLLECTION - CHAIN OF CUSTODY FORM

To be completed by the person collecting the sample. See reverse side for instructions.

1. Client name Omega Protein
2. Sampler's name J.R. Hall
3. Sample source Lagoon Discharge
4. Outfall/station 002
5. Purchase order no. ______
6. Affiliation ______
7. ~~NPDES permit~~ no./County Northumberland Co
8. Test period for which data is being submitted:
9. *Sampler/relinquished by:* John A Hall / 7-23-02 *Date;Received by:* Anthony D. [illegible] / 7/24/02 *Date;*
Sampler/relinquished by: ______ / ______ *Date;Received by:* ______ / ______ *Date.*

Description of Sampling Methods and Equipment

10. Type of sample collected:
- Grab ______
- Date collected ______
- Time collected ______
- Volume ______
- Composite ✓
- Composite type Continous
- Collection period: from 7-22-02 (date) 7 am (time) to 7-23-02 (date) 7 am (time)

11. Flow during sampling 41,600
12. Type of container 1-gal. plastic
13. Number of containers shipped 1
14. No. of subsamples ______
15. Frequency ______
16. Volume ______

Condition of Effluent at Time of Collection

17. pH 8.41
18. Chlorine ______
19. Temperature:
    At collection point ______
    In collection device (comp. sample must be @ or below 4°C) 4°C
20. Is the sample:
    Chlorinated ______
    Dechlorinated ______
    Unknown ______
    Dechlorination method ______

Shipping Information

21. Method of shipment UPS
22. Date shipped 7-23-02
23. Time Approx. 2: pm
24. Was the sample packed with ice for shipment? yes
25. *Custody seal in place by* John A. Hall *Date* 7-23-02 *Time* 11:00 am

Instructions to Lab

26. Type of test(s) to be performed ______
27. Should BMI dechlorinate the sample (Yes or No) ______
28. Should ammonia be measured? (Yes or No) ______
29. Comments ______
30. I certify that the above information is correct John A Hall (Signature) 7-23-02 (Date)

For BMI Use Only

Alk 1/4
Hard 1/4
BMI Sample ID# OMP072402-7 *Received by* A. Timpano *Date* 7/24/02 *Time* 1155
Upon arrival at BMI: Custody seal ✓ Temperature 2°C pH 8.4 Chlorine <0.01 DO 9.0
On ice? ✓ Salinity 20 ppt Conductivity 16000
Visual description Clear Sample refrigerated yes
Test ID number(s) OMP072402-2

C:\[illegible] (Rev.1194)

TITLE: OMP072402-2
FILE: omp072402
TRANSFORM: NO TRANSFORM NUMBER OF GROUPS: 2

GRP	IDENTIFICATION	REP	VALUE	TRANS VALUE
1	0	1	1.0000	1.0000
1	0	2	1.0000	1.0000
1	0	3	1.0000	1.0000
1	0	4	1.0000	1.0000
2	100	1	0.8000	0.8000
2	100	2	1.0000	1.0000
2	100	3	1.0000	1.0000
2	100	4	1.0000	1.0000

OMP072402-2
File: omp072402 Transform: NO TRANSFORM

SUMMARY STATISTICS ON TRANSFORMED DATA TABLE 1 of 2

GRP	IDENTIFICATION	N	MIN	MAX	MEAN
1	0	4	1.000	1.000	1.000
2	100	4	0.800	1.000	0.950

OMP072402-2
File: omp072402 Transform: NO TRANSFORM

SUMMARY STATISTICS ON TRANSFORMED DATA TABLE 2 of 2

GRP	IDENTIFICATION	VARIANCE	SD	SEM	C.V. %
1	0	0.000	0.000	0.000	0.00
2	100	0.010	0.100	0.050	10.53

OMP072402-2
File: omp072402 Transform: NO TRANSFORM

STEEL'S MANY-ONE RANK TEST - Ho:Control<Treatment

GROUP	IDENTIFICATION	TRANSFORMED MEAN	RANK SUM	CRIT. VALUE	df	SIG
1	0	1.000				
2	100	0.950	16.00	11.00	4.00	

Critical values use k = 1, are 1 tailed, and alpha = 0.05

OMP072402-2
File: omp072402 Transform: ARC SINE(SQUARE ROOT(Y))

Shapiro - Wilk's test for normality

D = 0.043

W = 0.706

Critical W (P = 0.05) (n = 8) = 0.818
Critical W (P = 0.01) (n = 8) = 0.749

Data FAIL normality test. Try another transformation.

Warning - The F-test of homogeneity is sensitive to non-normal data and should not be performed.

BIOLOGICAL MONITORING , INC.
Toxicity Test Procedure Check Sheet

Page _____ of _____

Test I.D. #: OMP 072402-2 Test containers used: PP

Specify below no. milliliters (mLs) of diluent and effluent measured out per concentration in this test:

No. of replicates per concentration: 4

Are all test chambers properly labeled? yes

Specify vessel type and volume used to measure and deliver effluent and diluent to test chambers:

graduated cylinder (s): 2000 pipet (s): _____

volumetric flask (s): _____ other _____

Concentration (%) mg/L Other	Diluent	Effluent	Total
0	1700	0	1700
100	0	1700	1700

Specify material (s) used to place test organisms into test chambers: wide bore pipet

Total Chlorine of sample upon arrival (mg/L): <0.01

Total Chlorine of sample after dechlorination (mg/L): NA

Pretest treatment for organisms: Normal

Exposure Chamber
Total vessel capacity: 800mL
Test solution volume: 400mL
Water Depth Constant: ✓
Cyclic: _____

Feeding schedule
Pretest feeding: _____
Not fed: _____
Fed daily: 2x
Fed irregularly (describe) _____
Type of food: live rinsed artemia

Aeration
Pretest: _____
None: ✓
Slow: _____ (bubbles/min)
Moderate: _____
Vigorous: _____
Beginning: _____ (hour)

Screened Animal Enclosures
Not used: ✓
Used: _____
Photoperiod:
8h/16h: ✓
Other: _____

Conditions of surviving organisms at end of test: Normal

Methods of randomization employed: Random #

Comments: Organisms @ 27 ppt upon arrival
Salinated Sample to 25 ppt

ACUTE TEST DATA REVIEW CHECKLIST

ermit Number VA 0003867 Outfall 006 Permittee Omega

Test Date 6/26-27/12 Period Reviewed: QT __ SA __ AN ✓ Other ____
1st __ 2nd __ 3rd __ 4th __

Testing Laboratory BMT

#	ACUTE DATA PARAMETER - (Some are organism specific)	YES	NO
1.	Was the test performed as per schedule?	✓	
2.	Was the correct test performed?	✓	
3.	**Was the correct type of sample used?**	✓	
4.	Were pH, temp, Cl of sample checked at sample site (or within 15 minutes of sample retrieval)?	✓	ple site (o
5.	**Was the sample packed in ice and chilled to ≤4° C for transport? NOTE: Frozen samples are not valid!**	✓	
6.	Were pH, DO, Cl, temperature and sample description recorded upon receipt?	✓	
7.	Does description (visual, scent) of sample (when received at lab) seem typical for this type of facility?	✓	
8.	**Was the test initiated within 36 hours of sample retrieval from sampler?**	✓	
9.	a. Was the sample DO ≥ 4.0 mg/l and ≤ saturation at 25° C prior to test initiation? (applies to *D. ulex, C. dubia, M. bahia, P. promelas, C. variegatus*) b. Was the sample DO ≥ 6.0 mg/l and ≤ saturation at 12° C prior to test initiation? (applies to *O. ykiss*)	✓	iegatus)
10.	If 9 is "NO", was the DO adjusted to the acceptable range (see a. and b. above) prior to test initiation?	NA	
11.	If the sample had a chlorine residual, was it dechlorinated?	NA	
12.	**Did the permit allow for dechlorination of the sample? (Only if it contains a compliance schedule for Cl limit or for dechlorination)**	NA	
13.	If the sample was dechlorinated, were controls treated with the same amount of dechlorination agent and run with untreated controls? (determines adverse effect of agent)	NA	
14.	Was the sample pH within the 6.0 - 9.0 range?	✓	
15.	**Was the age of the organisms in the correct range at test initiation?** **a. *P. promelas and C. variegatus* - 1-14 days old, within 24 hours of age of each other** 3day **b. *O. mykiss* - 15-30 days old** **c. *D. pulex and C. dubia* - <24 hours old** **d. *M. bahia* - 1-5 days old, within 24 hours of age of each other**	✓	
16.	Were 5 geometric test concentrations (preferably 0.5 series) and 1 control set up?	✓	
17.	Was the test chamber size acceptable? a. *P. promelas, C. variegatus, M. bahia* - 250 ml minimum b. *O. mykiss* - 5000 ml minimum c. *D. pulex and C. dubia* - 30 ml minimum	✓	
18.	Was the sample volume acceptable? a. *P. promelas, C. variegatus, M. bahia* - 200 ml minimum b. *O. mykiss* - 4000 ml minimum c. *D. pulex* - 25 ml minimum	✓	

CHRONIC 7-DAY SURVIVAL, GROWTH AND FECUNDITY TEST WITH MYSIDOPSIS BAHIA

Day of test		NUMBER OF SURVIVING MYSIDS PER DAY								FEMALE WITH EGGS	FEMALE NO EGGS	MALE	NOT MATURE
Date		DAY 0 / /	DAY 1 / /	DAY 2 / /	DAY 3 / /	DAY 4 / /	DAY 5 / /	DAY 6 / /	DAY 7 / /				
CONC:	A												
	B												
	C												
	D												
	E												
	F												
	G												
	H												
Totals													
CONC:	A												
	B												
	C												
	D												
	E												
	F												
	G												
	H												
Totals													
CONC:	A												
	B												
	C												
	D												
	E												
	F												
	G												
	H												
Totals													
CONC:	A												
	B												
	C												
	D												
	E												
	F												
	G												
	H												
Totals													
CH/TIME													

#	ACUTE DATA PARAMETER - (Some are organism specific)	YES	NO
	d. *C. dubia* - 15 ml minimum		
19.	Was the minimum number of replicates per concentration represented? *a.* 2 replicates - *P. promelas, O. mykiss* *C. variegatus, M. bahia* *b.* 4 replicates - *D. pulex, C. dubia*	—	
20.	Was the minimum number of organisms in each replicate? *a.* 10 organisms - *P. promelas, O. mykiss* *C. variegatus, M. bahia* *b.* 5 organisms - *D. pulex, C. dubia*	—	
21.	a. Was the dilution water synthetic moderately hard water or 20% DMW? (applies to freshwater pecies *P. promelas, O. mykiss, D. pulex, C. dubia)* b. Was the dilution water synthetic moderately hard water or 20% DMW that had been adjusted to 20 2 ppt, or the same salinity as the receiving water? (applies to salt water species, *C. variegatus, M. bahia)*	✓	
22.	Was the dilution water hardness within the 80-100 mg $CaCO_3$/L?	NA	
23.	Was the dilution water hardness within the 60-70 mg $CaCO_3$/L?	NA	
24.	Was the dilution water pH within the range of 7.4 – 7.8 (7.9 – 8.3 for mineral water)?	✓	
25.	**a. Was the test temperature 25±1° C upon initiation, and throughout the test? (applies to *P. romelas, D. pulex, C. dubia C. variegatus, M. bahia)*** **b. Was the test temperature 12±1° C upon initiation, and throughout the test? *(applies to O. ykiss)***	✓	
26.	**Was the temperature measured daily in one replicate of each concentration?**	✓	
27.	Was the DO measured daily in one replicate of each concentration? (Exceptions to this requirement are for tests using *D. pulex* or *C. dubia,* where the 24-hr DO reading can be omitted to prevent organism stress.)	—	
28.	If the DO dropped to <4.0 mg/l, was aeration initiated? (Exceptions to this requirement are for tests *using D. pulex or C. dubia,* where aeration is impractical.) all aerated at 24 hr when 100% was < than 4	✓	
29.	If aeration was necessary (and acceptable), were **all** test chambers aerated for the duration of the test, and the time at which aeration was initiated recorded?	✓	
30.	If aeration was necessary (and acceptable), was it applied at a maximum rate of 100 bubbles/minute so as not to cause injury to the organisms?		Unknown
31.	Was pH measured at the beginning and end of the test (daily is optimal) for a 48-hour test, or at 0, 48 hours, after renewal, and at 96 hours for a 96-hour test in one replicate of each sample concentration?	—	
32.	a. For a freshwater test, was conductivity measured at the beginning and end (also at renewal for 96-our tests) of the test in one replicate of each concentration? (applies to freshwater species *P. promelas, O. ykiss, D. pulex, C. dubia)* b. For a saltwater test, was salinity measured at the beginning and end (also at renewal for 96-hour sts) of the test in one replicate of each concentration? (applies to salt water species, *C. variegatus, M. ahia)*	—	
33.	For freshwater tests, was the alkalinity measured in 100% effluent and the control at the beginning of the test?	NA	
34.	For freshwater tests, was the hardness measured in 100% effluent and the control at the beginning of the test?	NA	
35.	a. For a test using *Mysidopsis bahia,* were the mysids fed *Artemia* nauplii daily? b. For a 96-hour test using either *Pimephales promelas* or *Cyprinodon variegatus*, were the larvae ed prior to sample renewal at 48 hours?	NA	
36.	For a 96-hour test using either *Pimephales promelas* or *Cyprinodon variegatus*, was the sample used for	NA	

#	ACUTE DATA PARAMETER - (Some are organism specific)	YES	NO
	renewal the original sample?		
37.	Was the daily photoperiod 16 hours light/8 hours dark?	✓	
38.	Were the surviving organisms counted daily in all test chambers?	✓	
39.	Was the test terminated at 48±1 hours (less than 47 hours invalidates the test) or 96±1 hours (less than 95 hours invalidates the test)?	✓	
40.	Was the percent survival in each concentration recorded at the end of the test?	✓	
41.	**Was the percent survival in the controls ≥90%?**	✓	
42.	Was the LC_{50} correctly determined? none due to lack of mortality		
43.	If the acute test was run in conjunction with a chronic test using the same species, was the acute test initiated with the second or third sample pulled for the chronic test? (Any sample other than the same sample used to initiate the chronic test is acceptable.)	✓	

Items in bold type (and shaded) are significant in that if they are answered "NO", the test is automatically deemed "not acceptable" and must be repeated to fulfill permit TMP requirements. Bold type items are numbers 3, 5, 8, 12, 15, 25, 26, and 41.

RESPONSE GUIDE

1. - 8.	Response should be "YES" or note the problem in the review
9. - 10.	If 9. is "NO", then 10. must be "YES" or the test is not acceptable
11. - 13.	If 11. is "YES", then 12. and 13. must be "YES" or the test is not acceptable
14. - 17.	If 14. is "NO", then 15., 16. and 17 must be "YES" or the test is not acceptable
18. - 43.	Response should be "YES" or note the problem in the review

RATING

ACCEPTABLE	NOT ACCEPTABLE

Comments

mg dry wt < 0.6 mg

CHRONIC TEST DATA REVIEW CHECKLIST

Permit Number VA0003867 Outfall 006 Permittee Omega

Test Start Date 6/26/02 - 7/3/02 Period Reviewed: QT ___ SA ___ AN ✓ Other ___
1st ___ 2nd ___ 3rd ___ 4th ___

Testing Laboratory BMT

#	CHRONIC DATA PARAMETERS - (Some are organism specific)	YES	NO
1.	Was the test performed as per schedule?	✓	
2.	Was the correct test performed?	✓	
3.	**Was the correct type of sample collected at each sampling event?**	✓	
4.	**Was a minimum of 3 samples collected?**	✓	
5.	Were pH, temp, Cl of sample checked at sample site (or within 15 minutes of sample retrieval) for each sample?	✓	
6.	**Was each sample packed in ice and chilled to ≤4° C for transport? NOTE: Frozen samples are not valid!**	✓	
7.	Were pH, DO, Cl, temperature and sample description recorded upon receipt of each sample?	✓	
8.	Does the description (visual, scent) of each sample (when received at lab) seem typical for this type of facility?	✓	
9.	**Was the test initiated within 36 hours of sample retrieval from sampler? Was the first use of a sample for renewal within 36 hours?**	✓	
10.	**Was the last use of the sample within 72 hours of retrieval from the sample device?**	✓	
11.	a. Was the sample DO ≥ 4.0 mg/l and ≤ saturation at 25° C prior to test initiation? (applies *to C. dubia* and *P. promelas)* b. Was the sample DO ≥ 6.0 mg/l and ≤ saturation at 25° C prior to test initiation? (applies *to C. variegatus* and *M. bahia)*	✓	
12.	If "11." is "NO", was the DO adjusted to the acceptable range (see a., and b. above) prior to test initiation?	✓ Some	
13.	If the sample had a chlorine residual, was it dechlorinated?	NA	
14.	**Did the permit allow for dechlorination of the sample? (Only if it contains a compliance schedule for a chlorine limit or for dechlorination)**	NA	
15.	If the sample was dechlorinated, were controls treated with the same amount of dechlorination agent and run with untreated controls? (This determines any adverse effect of the dechlorination agent.)	NA	
16.	Was each sample pH within the 6.0 - 9.0 range?	✓	
17.	**Was the age of the organisms in the correct range at test initiation?** a. ***P. promelas* and *C. variegatus* - <24 hours old (24-48 hours old is acceptable if the organisms were shipped in from an outside source)** c. ***C. dubia* - <24 hours old, within 8 hours of age of each other** d. ***M. bahia* - 7 days old, within 24 hours of age of each other**	✓	
18.	Was a minimum of 5 geometric test concentrations and 1 control set up?	✓	
19.	Was the test chamber size acceptable? a. *P. promelas* - 500 ml minimum b. *C. variegatus* - 300-1000 ml (e 00	✓	

#	CHRONIC DATA PARAMETERS - (Some are organism specific)	YES	NO
	c. *M. bahia* - 400 ml d. *C. dubia* - 30 ml minimum		
20.	Was the sample volume acceptable? a. *P. promelas* - 250 ml minimum b. *C. variegatus* - 250-750 ml 300 mL c. *M. bahia* - 150 ml d. *C. dubia* - 15 ml minimum	—	
21.	Was the minimum number of replicates per concentration represented? a. 3 replicates (4 preferred) - *P. promelas, C. variegatus* 4 b. 8 replicates - *M. bahia* c. 10 replicates - *C. dubia*	—	
22.	Was the minimum number of organisms in each replicate? a. 10 organisms - *P. promelas, C. variegatus,* ✓ 10 b. 5 organisms - *M. bahia* c. 1 organism - *C. dubia*	—	
23.	a. Was the dilution water synthetic moderately hard water or 20% DMW? (applies to freshwater species *P. promelas, C. dubia)* b. Was the dilution water synthetic moderately hard water or 20% DMW that had been adjusted to 20 ± 2 ppt, or the same salinity as the receiving water? (applies to salt water species, *C. variegatus, M. bahia)*	✓	
24.	Freshwater - Was the dilution water hardness within the 80-100 mg $CaCO_3$/L?	NA	
25.	Freshwater - Was the dilution water hardness within the 60-70 mg $CaCO_3$/L?	NA	
26.	Freshwater - Was the dilution water pH within the range of 7.4 – 7.8 (7.9 – 8.3 for mineral water)?	NA	
27.	Saltwater – was the salinity 20±2 ppt?	✓	
28.	**a. Was the test temperature 25±1° C upon initiation, and throughout the test (applies to *P. promelas, C. dubia and C. variegatus)*?** **b. Was the test temperature 26±1° C upon initiation, and throughout the test (applies to *M. bahia)*?**	re 25±1° ✓	
29.	**Was the temperature measured daily in one replicate of each concentration?**	—	
30.	Was the DO measured daily, before and after renewal in one replicate of each concentration?	—	
31.	a. If the DO dropped to <4.0 mg/l in a test using *P. promelas*, was aeration initiated? For a test using *C. dubia*, a low DO sample should be aerated prior to test initiation or renewal, as aeration with the organisms present is impractical.) b. If the DO dropped to ≤6.0 mg/l in a saltwater test, was aeration initiated?		✓
32.	If aeration was necessary (and acceptable), were all test chambers aerated for the duration of the test, and the time at which aeration was initiated recorded? (Not applicable to tests using *C. dubia*)	NA	
33.	If aeration was necessary (and acceptable), was it applied at a maximum rate of 100 bubbles/minute so as not to cause injury to the organisms?	NA	
34.	Was pH measured at test initiation, and before and after sample renewal in one replicate of each concentration?	✓	
35.	For salt water test using *M. bahia*, was ammonia and nitrite measured prior to renewal in one replicate of each concentration?	NA	
36.	a. For a freshwater test, was conductivity measured at the beginning of each 24-hour period in one replicate of each concentration? (applies to freshwater species *P. promelas, C. dubia)* b. For a saltwater test, was the salinity measured at the beginning of each 24-hour period in one replicate of each concentration? (applies to salt water species, *C. variegatus, M. bahia)*	—	

#	CHRONIC DATA PARAMETERS - (Some are organism specific)	YES	NO
37.	For freshwater tests, was the alkalinity measured in 100% effluent and the control at test initiation, and for each new sample?	NA	
38.	For freshwater tests, was the hardness measured in 100% effluent and the control at test initiation, and for each new sample?	NA	
39.	a. For a test using *Mysidopsis bahia*, were the mysids fed *Artemia* nauplii (at a rate of 75/mysid) twice daily? b. For a test using *Pimephales promelas*, were the larvae fed 0.15 ml concentrated *Artemia* nauplii a minimum of twice daily? c. For a test using *Cyprinodon variegatus*, were the larvae fed *Artemia* nauplii once per day at a rate of 0.1 g (wet weight) for days 0-2, and 0.15 g (wet weight) for days 3-6? fed 2x daily d. For a test using *Ceriodaphnia dubia*, were the organisms fed 0.1 ml YCT and 0.1 ml algae per day after renewal?		✓
40.	Was the sample data for the renewal days consistent with the data for the first use of that sample?	✓	
41.	Was the daily photoperiod 16 hours light/8 hours dark?	✓	
42.	Were the surviving organisms counted daily in all test chambers?	✓	
43.	Were the number of young produced recorded daily for the *C. dubia* test?	NA	
44.	Was the occurrence of males noted in the *C. dubia* test?	NA	
45.	Were the daily renewals of chronic test solutions performed no earlier or later than subsequent 24±2 hour periods from test initiation? 9/26 1615h, SAMPLE USE times 1045 - 1430		✓
46.	**a. For tests using *P. promelas*, *C. variegatus*, or *M. bahia*, was the test terminated 7 days (this is interpreted as 7 24-hour periods) and within ± 1 hour of the time of day at which it was initiated?** **b. For tests using *C. dubia*, was the test terminated when 60% or more of the surviving females in the controls had produced their third brood within 8 days?**	✓	
47.	Was the percent survival in each concentration recorded at the end of the test?	✓	
48.	**Was the percent survival in the controls ≥80%?**	✓	
49.	**Did the test meet the additional acceptability criteria?** **a. *P. promelas* - For tests initiated with larvae ≤ 24 hours old, was the average dry weight of the control larvae surviving at the end of the test ≥ 0.25 mg?** **b. *C. variegatus* - For tests initiated with larvae ≤ 24 hours old, was the average dry weight of control larvae ≥ 0.60 mg (unpreserved), or ≥ 0.50 mg (preserved)?** 0.517 **c. *M. bahia* - Was the average weight of the controls ≥ 0.20 mg?** **d. *C. dubia* - Did reproduction in the controls average 15 or more young per surviving female?**		✓
50.	Were the data Arcsin transformed prior to statistical analysis (*M. bahia* – survival and growth, *C. variegatus* – survival, *P. promelas* – survival)?	✓	
51.	Was the NOEC correctly determined using the appropriate statistical method?	✓	
52.	Did the test result in a calculable NOEC (Result reported as "<" is not acceptable. Lower dilutions should have been added or the test rerun to determine the result.)	✓	
53.	Was the IC_{25} reported for the test?		✓
54.	Was the LC_{50} at 48 hours reported for the test?		✓

Items in bold type (and shaded) are significant in that if they are answered "NO", the test is automatically invalidated and must be repeated to fulfill permit TMP requirements. Bold type items are numbers 3, 4, 6, 9, 10, 14, 17, 28, 29, 46, 48, and 49.

RESPONSE GUIDE

1. - 10. Response should be "YES" or note the problem in the review
11. - 12. If 11. is "NO", then 12. must be "YES" or the test is subject to invalidation
13. - 15. If 13. is "YES", then 14. and 15. must be "YES" or the test is subject to invalidation
20. - 54. Response should be "YES" or note the problem in the review

RESULTS

ACCEPTABLE	NOT ACCEPTABLE

COMMENTS:

BIOLOGICAL MONITORING, INC.
Toxicity Test Condition Summary

Client: Omeg a Protein

Prepared by: Anthony Smith

NPDES Perm t #: VA0003867

Experiment II #: OMP062802-3

Test Organism: Cyprinodon variegatus

Test Type: St tic Acute

Organism Age at Start of Test: 3 d

Sample Tested: Outfall 006

Sample Type: Composite

Sample Collec on Frequency and Dates and Times: From 06/26/02 @ 0700 to 06/27/02 @ 0700

Sample Collect r: J.R. Hall

Delivered by: UPS

Test Solution F newal Frequency: N/A

Dilution Water Used: Synthetic Seawater 062502

Test Temperatu e: 25 ± 1°C

No. of Replicat s per conc.: 2

No. of Organisms per Replicate: 10

Feeding prior to test: Normal

Feeding Regime: Not fed

Chamber Size: 00 mL PP

Test Volume: 350 mL

Photo Period: 1 ih light/8h dark

Test Duration: 48 h

Start of Test: D te: 06/28/02

Time: 1610

End of Test: Da e: 06/30/02

Time: 1536

Equipment:

pH Mete : SA 720 (A)
DO Met r: YSI 58 (b)
SCT Me er:YSI 33 (A)
°C Meas rement: Calibrated Thermometer
Salinity: SCT Meter
Chlorine Fisher/Porter Amperometric Titrator

Test Method Ref rence: U.S. EPA. 1993. Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms. EPA/600/4-90/027F.

BIOLOGICAL MONITORING, INC.
Acute Toxicity Test Data Summary

Client	Omega Protein	NPDES PERMIT #: VA0003867		
Test Organism	Cyprinodon variegatus		Date	Time
Experiment II	OMP062802-3	Start Test	06/28/02	1610
Sample Tested	Outfall 006	End Test	06/30/02	1536

RESULTS

Water Chemistry Analyses
(Range)

Conc. %	Temp. (°C)	D.O. (mg/L)	pH	Salinity (ppt)	Survival (%) 48 h
0	25-26	5.9-6.7	7.9-8.0	20-21	100
6.25	25-26	5.8-6.5	7.8-8.0	20-21	100
12.5	25-26	5.6-6.4	7.7-8.0	20	100
25	25-26	5.4-6.4	7.8-8.0	20	90
50	25-26	4.8-6.3	7.7-8.0	19	100
100	25-26	3.6-6.3	7.6-8.0	19	90

STATISTICAL ANALYSES

Test Method	LC50 (%)	95% Fiducial (Confidence) Limits
N/A	N/A	N/A
COMMENTS: No LC50 generated due to lack of mortality.		

TOXICITY TEST DATA SHEET

Page ___ of ___

Experiment I.D. #: OMP062802-3 NPDES Permit #: VA0005967 Project Scientist: Benjamin A. Mackey

Client: Omega Protein QC Officer:

Effluent/Sample: OMP062802 Test Organism Species: A. tonsa Org. Batch #: MD062004

Sample Container: P.e. Number of Organisms per Concentration: 20 Age: 3 Days

Sample Type: Date and Time of Collection: Dilution Water Used: Synthetic Seawater Batch #: 0x2502 J

Grab: Date: ___ Time: ___ Test Temperature: 25 ± 1°C

Composite: From: Date: ___ Time: ___ To: Date: ___ Time: ___ Start of Test: Date: 062802 Time: 1610

Test Mode: ___ Test Duration: ___ End of Test: Date: 063002 Time: 1536

Conc. in %	Test Conc.	Number of Live Organisms					Dissolved Oxygen (mg/L)					pH					Salinity 0/00					Temperature (°C)				
		0	24	48	72	96	0	24	48	72	96	0	24	48	72	96	0	24	48	72	96	0	24	48	72	96
0	A	10	10	10			6.7	5.9*	6.3			8.0	7.9	7.9			21	21	20			25	26	25		
	B	10	10	10																						
6.25	A	10	10	10			6.5	5.8*	6.3			7.9	7.8	8.0			20	21	20			25	26	25		
	B	10	10	10																						
12.5	A	10	10	10			6.4	5.6*	6.4			7.9	7.7	8.0			20	20	20			25	26	25		
	B	10	10	10																						
25	A	10	9	9			6.2	5.4*	6.4			7.9	7.8	8.0			20	20	20			25	26	25		
	B	10	10	10																						
50	A	10	10	[illegible]			5.4	4.9*	6.3			7.9	7.7	8.0			19	19	19			25	26	25		
	B	10	10	10																						
100	A	10	10	9			4.2	3.6*	6.3			7.9	7.6	8.0			19	19	19			25	26	25		
	B	10	10	10																						
Recorded By:		MAS	BM	BM			MAS	BM	BM			MAS	BM	BM			MAS	BM	BM			MAS	BM	BM		

* mg/L as $CaCO_3$ *Aerated @ 24hrs.

BIOLOGICAL MONITORING, INC.
Toxicity Test Procedure Check Sheet

Page___of___

Test I.D.#: OMP062802-3 Permit # VA000[illegible] Test Containers Used: P.P. # of replicates/concentration: 2

Specify below volume of diluent and effluent measured out per concentration in this test:

Concentration % mg/L other	Diluent(mLs)	Effluent(mLs)	Total(mLs)
0	800	0	800
6.25	750	50	800
12.5	700	100	800
25	600	200	800
50	400	400	800
100	0	800	800

Are all test chambers properly labeled? ✓

Specify vessel type and volume used to measure and deliver effluent and diluent to test chambers:

Graduated cylinder(s) 2000_____ 1000 ✓ 500 ✓ 250 ✓ 100 ✓ 50_____ 25_____ 10_____

Volumetric flask(s) 1000_____ 500_____ 200_____ 100_____

Pipet(s) 10_____ 5_____ 1_____ Other_____

Specify material (s) used to place test organisms into test chambers: wide bore pipet

Total Chlorine of sample upon arrival (mg/L) N/A

Total Chlorine of sample after dechlorination (mg/L) N/A

Exposure Chamber
Total Vessel Capacity: 800 ml
Test Solution Volume: 350 ml
Water Depth Constant: X
Cyclic:_____

Feeding Schedule
Pretest Feeding:_____
Not fed: X
Fed Daily:_____
Fed irregularly (describe)_____
Type of Food:_____

Aeration
Pretest:_____
None: X
Slow:_____ (bubbles/min)
Moderate:_____
Vigorous:_____
Beginning:_____ (hour)

Screened Animal Enclosures
Not Used: X
Used:_____

Photoperiod:
16h/8h: ✓
other:_____

Organism pretest treatment
Normal

Conditions of surviving organisms at end of test: Normal

Methods of Randomization employed: Random #

Comments:_____

BIOLOGICAL MONITORING, INC.
LABORATORY WORK ORDER

№ 11178

Project Manager: [illegible] Date: 6/24/02

Assigned to: _____ Test Start Date: 6/26/02

Client: [illegible] Client's P.O.#: _____

Test ID# OMP062802-3 BMI Project #: 5269

Test Description: SAC Test Prefix: OMP

Test Conditions (Circle Appropriate Choice)

(Acute)/Chronic

(Organism: P.p., D.p., D.m., C.d., M.b., C.v, H.a., Ct Toxicant: Outfall 006
Other: _____ Permit No.#: VA0003867

(Duration: 24h, 48h, 96h, 7d, 3 brood Test Vol: 350ml
Renew at: 24h, 48h, 96h, daily, (none), Chamber: 400ml

(Concentrations: ~~[0, 6.25, 12.5, 25, 50, 100%]~~ IWC: _____
Other: _____

(Replicates: 1, 2, 3, 4, 8, 10 Other: _____
Diluent: MHRW, Surface, (Synthetic Seawater)

Temperature: 12 ± 1°C, 20 ± 1°C, 23 ± 1°C, (25 ± 1°C)
Test Salinity: Freshwater, 13 ppt, (20 ppt)

Feeding: 1 x daily, 2 x daily, 3 x daily, (none), as specified _____

Dechlorination Sample: Yes (No) (Circle One)
pH Adjustment to be done: Yes (No) IF necessary

Extra Controls: _____

Special Conditions: Salinity Sample

Comment: _____

BIOLOGICAL MONITORING, INC.
Toxicity Test Condition Summary

Client: Omeg a Protein

Prepared by: Anthony Smith

NPDES Perm : #: VA0003867

Experiment II #: OMP062602-1

Test Organism Cyprinodon variegatus

Test Type: Sh rt Term Chronic

Organism Age at Start of Test: < 24h

Sample Tested Outfall 006

Sample Type: Composite

Sample Collec on Frequency and Dates and Times: From 06/25/02 @ 0530 to 06/25/02 @ 0900; From 06/26/02 @ 0700 to 06/27/02 @ 0700; From 06/28/02 @ 0700 to 06/29/02 @ 0700

Sample Collect r: J.R. Hall

Delivered by: J.R. Hall

Test Solution R newal Frequency: Daily

Dilution Water Used: Synthetic Seawater 062502

Test Temperatu e: 25 ± 1°C

No. of Replicat s per conc.: 4

No. of Organisms per Replicate: 10

Feeding prior to test: Not fed

Feeding Regime: 2x daily

Chamber Size: 1 00 mL PP

Test Volume: 300 mL

Photo Period: 1 h light/8h dark

Test Duration: 7 d

Start of Test: Da te: 06/26/02

Time: 1615

End of Test: Da e: 07/03/02

Time: 1515

Equipment:

pH Mete : SA 720 (A)
DO Met r: YSI 58 (b)
SCT Me er:YSI 33 (A)
°C Meas rement: Calibrated Thermometer
Salinity: SCT Meter
Chlorine Fisher/Porter Amperometric Titrator

Test Method Refi ence: U.S. EPA. 1994. Short-Terms Methods for Estimating the Chronic Toxicity of Effluents and Receiving Water s Freshwater Organisms. EPA/600/4-91/002.

BIOLOGICAL MONITORING, INC.
Chronic Toxicity Test Data Summary

Clie nt	Omega Protein	**NPDES PERMIT #: VA0003867**		
Test Or anism	Cyprinodon variegatus		**Date**	**Time**
Experi nent ID	OMP062602-1	**Start Test**	06/26/02	1615
Sample ested	Outfall 006	**End Test**	07/03/02	1515

RESULTS

Water Chemistry Analyses
(Range)

Conc. %	Temp. (°C)	D.O. (mg/L)	pH	Salinity (ppt)	Survival (%) 96 h/7 d	Mean Weight (mg)
0	25-26	6.0-7.3	7.8-8.0	20-21	100/100	0.517
0.5	25-26	5.8-7.3	7.8-8.0	20-21	100/100	0.585
1	25-26	5.7-7.9	7.8-8.0	20-21	100/100	0 684
2	25-26	5.67.8	7.7-8.0	20-21	100/100	0.598
51	25-26	5.3-8.0	7.7-8.2	19-21	97.5/95	0 580
100	25-26	5.0-8.2	7.7-8.3	19-21	100/100	0 591

STATISTICAL ANALYSES

Test Met od	End Point		
Steel's Man One Rank	**Survival**	**NOEC = 100%**	**LOEC = N/A**
Steel's Man One Rank	**Growth**	**NOEC = 100%**	**LOEC = N/A**

NOEC = Nc Observed Effect Concentration LOEC = Lowest Observed Effect Concentrat:.on

SURVIVAL I ATA

1. Arc Sine tr nsformation was used.
2. Data FAIL ormality test using Shapiro-Wilke's Test.
3. Data FAIL omogeneity test using Bartlett's Test.
4. Cyprinodon ariegatus survival in all the effluent concentrations was not significantly different th n survival in the control using Steel's Many One Rank Test,(alpha=0.05).

GROWTH DA TA

1. No transfor nation was used.
2. Data FAIL ormality test using Shapiro-Wilke's Test.
3. Data PASS omogeneity test using Bartlett's Test.
4. Cyprinodon ariegatus growth in all the effluent concentrations was not significantly different tha n growth in the control using Steel's Many One Rank Test,(alpha=0.05).

Comments:

Biological Monitoring, Inc.

Sheepshead Minnow (Cyprinodon variegatus) Larval Survival and Growth Sheet

Experiment ID: 2MP062602-1

Permit #: VA0 203867

Concentration	Day No.	A	B	C	D	No. live organisms	D.O. before renewal (mg/L)	D.O. after renewal (mg/L)	pH before renewal	pH after renewal	Temp. before renewal (°C)	Temp. after renewal (°C)	Salinity (ppt)	Alkalinity (mg/L as $CaCO_3$)	Hardness (mg/L as $CaCO_3$)	Chambers cleaned/renewed	1st feeding	2nd feeding	3rd feeding	Initials
0	0	10	10	10	10			7.3		7.8		26	20							BM
	1	10	10	10	10	10.7	7.3	8.0	7.9		26	26	20							BM
	2	10	10	10	10	6.1	6.6	7.8	7.8		26	26	21							BM
	3	10	10	10	10	6.2	6.7	7.9	7.8		26	26	21							BM
	4	10	10	10	10	6.0	6.4	7.9	8.0		26	25	21							BM
	5	10	10	10	10	6.0	6.2	7.9	7.9		25	25	21							MAS
0	6	10	10	10	10	6.0	6.2	8.0	8.0		26	26	21							AST
1300	7	10	10	10	10	10.9		8.0			26		21							MAS
0.5	0	10	10	10	10		7.3		7.9			26	20							BM
	1	10	10	10	10	10.6	7.3	7.8	8.0		26	26	20							BM
	2	10	10	10	10	6.0	6.5	7.8	7.9		26	26	20							BM
	3	10	10	10	10	6.0	6.8	7.9	7.8		26	26	21							BM
	4	10	10	10	10	5.8	6.4	8.0	8.0		26	25	21							BM
	5	10	10	10	10	5.9	6.2	7.8	7.8		25	25	21							MAS
6.5	6	10	10	10	10	5.8	6.3	7.8	7.9		26	26	21							AST
1300	7	10	10	10	10	10.8		7.9			26		20							MAS
1	0	10	10	10	10		7.9		7.9		26	26	20							BM
	1	10	10	10	10	6.6	7.4	7.8	7.9		26	26	20							BM
	2	10	10	10	10	5.9	6.5	7.8	7.9		26	26	20							BM
	3	10	10	10	10	6.0	6.7	7.8	7.8		26	26	20							BM
	4	10	10	10	10	5.7	6.5	7.8	8.0		26	25	21							BM
	5	10	10	10	10	5.7	6.2	7.7	7.8		25	25	21							MAS
13	6	10	10	10	10	5.7	6.2	7.8	7.9		26	26	21							AST
1300	7	10	10	10	10	10.9		7.9			26		20							MAS
2	0	10	10	10	10		7.8		7.9			26	20							BM
	1	10	10	10	10	10.5	7.3	7.8	7.9		26	26	20							BM
	2	10	10	10	10	5.8	6.5	7.8	7.9		26	26	20							BM
	3	10	10	10	10	5.9	6.7	7.8	7.8		26	26	20							BM
	4	10	10	10	10	5.6	6.4	7.8	8.0		26	25	21							BM
	5	10	10	10	10	5.7	6.3	7.7	7.8		25	25	21							MAS
26	6	10	10	10	10	5.8	6.3	7.8	7.9		26	26	21							AST
1300	7	10	10	10	10	10.9		7.9			26		20							MAS
51	0	10	10	10	10		8.0		8.1			26	19							BM
	1	10	10	10	10	10.1	11.6	7.8	8.2		26	26	19							BM
	2	10	10	10	10	5.4	[illegible]	7.8	7.9		26	26	20							BM
	3	10	10	10	10	5.3	6.3	7.7	7.8		26	26	19							BM
	4	10	9	10	10	5.4	6.5	7.8	8.0		26	25	21							BM
	5	10	9	10	8	5.3	5.9	7.8	7.8		25	25	21							MAS
663	6	10	10	10	8	5.5	6.4	7.8	7.8		26	26	20							AST
1300	7	10	10	10	8	6.5		7.9			26		20							MAS
100	0	10	10	10	10		8.2		8.3			26	19	92	320					BM
	1	10	10	10	10	6.1	7.3	7.9	8.0		26	26	19							BM
	2	10	10	10	10	5.5	[illegible]	7.8	8.0		26	26	19							BM
	3	10	10	10	10	4.5	6.0	7.7	7.9		26	26	19							BM
	4	10	10	10	10	4.8	6.6	7.8	8.0		26	25	21							BM
1300	5	10	10	10	10	5.2	6.4	7.8	7.9		25	25	21							MAS
1300	6	10	10	10	10	5.0	6.5	7.8	7.9		26	26	20							AST
	7	10	10	10	10	6.4		7.9			26		20							MAS

MONITORING, INC.
Short-term Chronic Toxicity Test Conditions
(Fish)

Permit # CA0003867

Experiment I.D.# OMP 062602-1

Organism: C. variegatus

Client: Omega Protein

Effluent Toxicant: Outfall 006

Sample Type: 24H Composite

Renewal Frequency: 1 x daily

Test Temperature: 25 ± 1°C

Dilution Water Used: Synthetic Seawater

Start of Test: Date: 062602 Time: 1615

End of Test: Date: 7/3/02 Time: 1515

Template #: Random #

Biologists Conducting Test: Benjamin A. Machino

QC Officer: MG

Test Organism Age: 24h

Organism Batch #: ABS 062602

Test Containers Used: 600ml P.P.

Feeding Schedule: 2 x daily

Aeration: NA

Sample Chlorine: NA

Test Volume: 300ml per replicate

SAMPLE COLLECTION				SAMPLE USE		
Date(s)		Time(s)				
From:	To:	From:	To:	Date(s)	Time(s)	Test Day
6/25/02	6/26/02	05:30	09:00	6/26/02	1330	0
06/26/02				6/27/02	1045	1
6/27/02	06/27/02	07:00	0:700	6/28/02	1430	2
				6/29/02	1345	* 3
06/28/02	06/29/02	07:00	0:700	6/30/02	12:15	* 4
				7/1/02	1200	* 5
				7/2/02	1145	6

Diluent Batch Carboy #/Days Used

SS062502 (0, 1, 2, 3, 4, 5,

The first use of a sample (acute or chronic) must be within 36-hours of retrieval from the sample collection device. Samples used after first use, to be used in chronic test solution renewals, must not be used if more than 72-hours have elapsed since retrieval from the sample collection device.

Condition of Organisms at End of Test: Normal

Average weight per control fish: 0.517 mg Control Survival (%): 100

Comments:

* Aerated Before Renewal

EMI/SOP 4.2 H 6.3

BMI BIOLOGICAL MONITORING, INC.
LABORATORY WORK ORDER

№ 11177

Project Manager: A. Smith

Date: 6/25/02

Assigned to: ______

Test Start Date: 6/26/02

Client: Omega Protein

Client's P.O.#: ______

Test ID# OMP062602-1

BMI Project #: 3269

Test Description: STC Cv

Test Prefix: OMP

Test Conditions (Circle Appropriate Choice)

Acute/Chronic (circled: Chronic)

Organism: P.p., D.p., D.m., C.d., M.b., C.v., H.a., Ct (circled: C.v.)
Other: ______

Toxicant: Outfall 006
Permit No.#: VA0003867

Duration: 24h, 48h, 96h, 7d, 3 brood ______ (circled: 7d)
Renew at: 24h, 48h, 96h, daily, none, ______ (circled: daily)

Test Vol: 300 ml
Chamber: 600 ml

Concentrations: [0, 6.25, 12.5, 25, 50, 100%]
Other: 0, 0.5, 1, 2, 5, · 100 (circled: Other)

IWC: ______

Replicates: 1, 2, 3, 4, 8, 10 (circled: 4)
Diluent: MHRW, Surface, Synthetic Seawater (circled: Synthetic Seawater)

Other: ______

Temperature: 12 ± 1°C, 20 ± 1°C, 23 ± 1°C, 25 ± 1°C (circled: 25 ± 1°C)
Test Salinity: Freshwater, 13 ppt, 20 ppt (circled: 20 ppt)

Feeding: 1 x daily, 2 x daily, 3 x daily, none, as specified ______ (circled: 2 x daily)

Dechlorination Sample: Yes/No (Circle One) (circled: No)
pH Adjustment to be done: Yes/No/IF necessary (circled: No)

Extra Controls: ______

Special Conditions: Salinity sample

Comments: ______

Biological Monitoring, Inc.
Weight Data Sheet Page___ of ___

Test II No. OMP 062602-1 Test Dates: 6/26/02 Species: C. variegatus

Organism or Concentration	Length	Initial Weight (mg)	Final Weight (mg)	Diff. (mg)	# Larvae	Avg. Wt. Larvae (mg)
C)A		55.73	59.98	4.25	10	0.425
C)B	45.93	~~49.95~~	51.20	~~1.25~~ 5.27	10	~~0.125~~ 0.527
C)C		49.32	54.61	5.29	10	0.529
C)D		47.46	53.31	5.85	10	0.585
C.5A		53.25	58.62	5.37	10	0.537
O.5B		54.93	61.03	6.10	10	0.610
O.5C		54.15	59.58	5.43	10	0.543
O.5D		103.07	69.58	6.51	10	0.651
1A		52.23	59.30	7.07	10	0.707
1B		46.94	53.98	7.04	10	0.704
1C		48.101	55.11	6.50	10	0.650
1D		46.80	53.54	6.74	10	0.674
2A		64.22	71.24	7.02	10	0.702
2B		70.98	76.19	4.21	10	0.421
2C		56.59	63.18	6.59	10	0.659
2D		55.57	61.71	6.14	10	0.614
5)A		51.24	58.22	6.98	10	0.698
5)B		46.06	53.38	7.32	10	0.732
5)C		50.34	57.43	7.09	10	0.709
5)D		50.64	52.46	1.82	10	0.182
10A		32.73	37.55	4.82	10	0.482
10B		43.27	49.62	6.35	10	0.635
10C		49.20	54.60	5.34	10	0.534
20D		48.18	55.29	7.11	10	0.711

SAMPLE COLLECTION - CHAIN OF CUSTODY FORM

10968

To be completed by the person collecting the sample. See reverse side for instructions.

1. Client name OMEGA PROTEIN
2. Sampler's name ANDY HALL
3. Sample source DITCH
4. Outfall/station 006
5. Purchase order no.
6. Affiliation Production Manager
7. NPDES permit no./County
8. Test period for which data is being submitted:

9. *Sampler relinquished by:* ______ / ______ *Date;Received by:* ______ / ______ *Date;*

Sampler relinquished by: [signature] / ______ *Date;Received by:* ______ / ______ *Date.*

Description of Sampling Methods and Equipment

10. Type of sample collected:

Grab ______
Date collected ______
Time collected ______
Volume ______

Composite ✓
Composite type ______
Collection period: from 6-28-02 (date) 7:00 AM (time) to 6-29-02 (date) 7:00 AM (time)

11. Flow during sampling 6.973920
12. Type of container 2 GAL. PLASTIC
13. Number of containers shipped 2
14. No. of subsamples ______
15. Frequency ______
16. Volume ______

Condition of Effluent at Time of Collection

17. pH 8.37 18. Chlorine ______
19. Temperature:
At collection point ditch
In collection device (comp. sample must be @ or below 4°C) 4°

20. Is the sample:
Chlorinated ______
Dechlorinated ______
Unknown ______
Dechlorination method ______

Shipping Information

21. Method of shipment ______ 22. Date shipped ______ 23. Time Approx 8 AM
24. Was the sample packed with ice for shipment? yes
25. *Custody seal in place by* [signature] *Date* 6/29/02 *Time* ______

Instructions to Lab

26. Type of test(s) to be performed ______
27. Should BMI dechlorinate the sample (Yes or No) ______ 28. Should ammonia be measured? (Yes or No) ______
29. Comments ______

30. I certify that the above information is correct ______ ______
Signature Date

••

Alk 104
Hard 5000

For BMI Use Only

BMI Sample ID# OMP062902 *Received by* NATE MARGASON *Date* 06-29-02 *Time* 14:50
Upon arrival at BMI: Custody seal YES Temperature 3°C pH 8.2 Chlorine <0.01 mg/L DO 6.8
On ice? YES Salinity 18 ppt Conductivity 9000
Visual description CLEAR LIQUID Sample refrigerated ______
Test ID number(s) ______

10967

SAMPLE COLLECTION - CHAIN OF CUSTODY FORM

To be completed by the person collecting the sample. See reverse side for instructions.

1. Client name OMEGA PROTEIN
2. Sampler's name ANDY HALL
3. Sample source DITCH
4. Outfall/station 006
5. Purchase order no.
6. Affiliation PRODUCTION MANAGER
7. NPDES permit no./County
8. Test period for which data is being submitted:
9. *Sample relinquished by:* ______ / ______ *Date; Received by:* Benjamin [illegible] Mosley / 6/28/02 *Date;*

Sample relinquished by: John A Hall / ______ *Date; Received by:* ______ / ______ *Date.*

Description of Sampling Methods and Equipment

10. Type of sample collected:

Grab______
Date collected______
Time collected______
Volume______

Composite X
Composite type______
Collection period: from 06-26-02 (date) 7:00 AM (time) to 06/27/02 (date) 7:00 am (time)

11. Flow during sampling 6,973,920
12. Type of container 2 gal. plastic containers
13. Number of containers shipped 2
14. No. of subsamples______
15. Frequency______
16. Volume______

Condition of Effluent at Time of Collection

17. pH 8.40
18. Chlorine______
19. Temperature:

At collection point ditch
In collection device (comp. sample must be @ or below 4°C) 4

20. Is the sample:

Chlorinated______
Dechlorinated______
Unknown______
Dechlorination method______

Shipping Information

21. Method of shipment UPS
22. Date shipped 06/27/02
23. Time APPROX. 2:30 PM
24. Was the sample packed with ice for shipment? yes
25. *Custody seal in place by* John A Hall *Date* 06/27/02 *Time*______

Instructions to Lab

26. Type of test(s) to be performed______
27. Should BMI dechlorinate the sample (Yes or No)______
28. Should ammonia be measured? (Yes or No)______
29. Comments______
30. I certify that the above information is correct ______ Signature ______ Date

For BMI Use Only

Alk______
Hard______
BMI Sample ID # OMP062802 *Received by* B. Mosley *Date* 6/28/02 *Time* 11:45
Upon arrival at BMI: Custody seal ✓ Temperature 3° pH 7.26 Chlorine <0.01 mg/L DO 6.6
On ice? ✓ Salinity 19 ppt Conductivity 14000
Visual description Clear Fish Odor
Sample refrigerated ✓
Test ID number(s) OMP062602-1, OMP062802-3

10966

SAMPLE COLLECTION - CHAIN OF CUSTODY FORM

To be completed by the person collecting the sample. See reverse side for instructions.

1. Client name: OMEGA PROTEIN
2. Sampler's name: ANDY HALL
3. Sample source: ditch
4. Outfall/station: 006
5. Purchase order no.:
6. Affiliation: PRODUCTION Mgr
7. NPDES permit no./County:
8. Test period for which data is being submitted:
9. Samplerelinquished by: John A Hall / Date: Received by: Benjamin A Mackey 6/26/02 Date:
   Samplerelinquished by: / Date: Received by: / Date.

Description of Sampling Methods and Equipment

10. Type of sample collected:
    Grab
    Date collected
    Time collected
    Volume
    Composite ✓
    Composite type: 6-25
    Collection period: from 6-25-02 (date) 5:30 AM (time) to 6-25-02 (date) 9:00 AM (time)
11. Flow during sampling: 1,726,830
12. Type of container: 1 GAL. PLASTIC
13. Number of containers shipped: 1
14. No. of subsamples
15. Frequency
16. Volume

Condition of Effluent at Time of Collection

17. pH 8.51
18. Chlorine
19. Temperature:
    At collection point: DITCH
    In collection device (comp. sample must be @ or below 4 °C): 4°
20. Is the sample:
    Chlorinated
    Dechlorinated
    Unknown
    Dechlorination method

Shipping Information

21. Method of shipment: UPS
22. Date shipped: 6-25-02
23. Time: Approx. 2:30 PM
24. Was the sample packed with ice for shipment? yes
25. Custody seal in place by: John A Hall Date: 6/25/02 Time:

Instructions to Lab

26. Type of test(s) to be performed:
27. Should BMI dechlorinate the sample (Yes or No):
28. Should ammonia be measured? (Yes or No):
29. Comment:
30. I certify that the above information is correct: John A Hall (Signature) (Date)

For BMI Use Only

Alk 92
Hard 3020
BMI Sample ID # OM7062502 Received by B Mackey Date 6/26/02 Time 1115
Upon arrival at BMI: Custody seal ✓ On ice? ✓ Temperature 4°C Salinity 19 PPT pH 8.6 Chlorine <0.01 mg/l DO 9.2 Conductivity 12228
Visual description: Clear Odorless
Sample refrigerated ✓
Test ID number(s): OM7062502-1

OMP062602-1
File: 062602s1 Transform: ARC SINE(SQUARE ROOT(Y))

Shapiro - Wilk's test for normality

) = 0.070

W = 0.435

Critical W (P = 0.05) (n = 24) = 0.916
Critical W (P = 0.01) (n = 24) = 0.884

Data FAIL normality test. Try another transformation.

Warning - The first three homogeneity tests are sensitive to non-normal data and should not be performed.

OMP062602-1
File: 06262s1 Transform: ARC SINE(SQUARE ROOT(Y))

Hartley's test for homogeneity of variance
Bartlett's test for homogeneity of variance

These two tests can not be performed because at least one group has zero variance.

Data FAIL to meet homogeneity of variance assumption.
Additional transformations are useless.

TITLE: OMP062602-1
FILE: 062602s1
TRANSFORM: ARC SINE(SQUARE ROOT(Y)) NUMBER OF GROUPS: 6

GRP	IDENTIFICATION	REP	VALUE	TRANS VALUE
1	0	1	1.0000	1.4120
1	0	2	1.0000	1.4120
1	0	3	1.0000	1.4120
1	0	4	1.0000	1.4120
2	0.5	1	1.0000	1.4120
2	0.5	2	1.0000	1.4120
2	0.5	3	1.0000	1.4120
2	0.5	4	1.0000	1.4120
3	1	1	1.0000	1.4120
3	1	2	1.0000	1.4120
3	1	3	1.0000	1.4120
3	1	4	1.0000	1.4120
4	2	1	1.0000	1.4120
4	2	2	1.0000	1.4120
4	2	3	1.0000	1.4120
4	2	4	1.0000	1.4120
5	51	1	1.0000	1.4120
5	51	2	1.0000	1.4120
5	51	3	1.0000	1.4120
5	51	4	0.8000	1.1071
6	100	1	1.0000	1.4120
6	100	2	1.0000	1.4120
6	100	3	1.0000	1.4120
6	100	4	1.0000	1.4120

OMP062602-1
File: 062602s1 Transform: ARC SINE(SQUARE ROOT(Y))

SUMMARY STATISTICS ON TRANSFORMED DATA TABLE 1 of 2

GRP	IDENTIFICATION	N	MIN	MAX	MEAN
1	0	4	1.412	1.412	1.412
2	0.5	4	1.412	1.412	1.412
3	1	4	1.412	1.412	1.412
4	2	4	1.412	1.412	1.412
5	51	4	1.107	1.412	1.336
6	100	4	1.412	1.412	1.412

OMP062602-1
File: 062602s1 Transform: ARC SINE(SQUARE ROOT(Y))

SUMMARY STATISTICS ON TRANSFORMED DATA TABLE 2 of 2

GRP	IDENTIFICATION	VARIANCE	SD	SEM	C.V. %
1	0	0.000	0.000	0.000	0.00
2	0.5	0.000	0.000	0.000	0.00
3	1	0.000	0.000	0.000	0.00
4	2	0.000	0.000	0.000	0.00
5	51	0.023	0.152	0.076	11.41
6	100	0.000	0.000	0.000	0.00

OMP062602-1
File: 06262s1 Transform: ARC SINE(SQUARE ROOT(Y))

STEEL'S MANY-ONE RANK TEST - Ho:Control<Treatment

GROUP	IDENTIFICATION	TRANSFORMED MEAN	RANK SUM	CRIT. VALUE	df	SIG
1	0	1.412				
2	0.5	1.412	18.00	10.00	4.00	
3	1	1.412	18.00	10.00	4.00	
4	2	1.412	18.00	10.00	4.00	
5	51	1.336	16.00	10.00	4.00	
6	100	1.412	18.00	10.00	4.00	

Critical values use k = 5, are 1 tailed, and alpha = 0.05

OMP062602-1
File: 062612g1 Transform: NO TRANSFORMATION

Shapiro - Wilk's test for normality

D = 0.3 4

W = 0.6 1

Critical W (P = 0.05) (n = 24) = 0.916
Critical W (P = 0.01) (n = 24) = 0.884

Data FAIL normality test. Try another transformation.

Warning - The first three homogeneity tests are sensitive to non-normal data and should not be performed.

)MP062602-1
File: 0626)2g1 Transform: NO TRANSFORMATION

Bartlett's test for homogeneity of variance
Calculated B1 statistic = 14.71

Table Chi-square value = 15.09 (alpha = 0.01, df = 5)
Table Chi-square value = 11.07 (alpha = 0.05, df = 5)

Data PASS homogeneity test at 0.01 level. Continue analysis.

JMP062602-1
File: 062602g1 Transform: NO TRANSFORMATION

SUMMARY STATISTICS ON TRANSFORMED DATA TABLE 1 of 2

GRP	IDENTIFICATION	N	MIN	MAX	MEAN
1	0	4	0.425	0.585	0.517
2	0.5	4	0.537	0.651	0.585
3	1	4	0.650	0.707	0.684
4	2	4	0.421	0.702	0.599
5	51	4	0.182	0.732	0.580
6	100	4	0.482	0.711	0.591

OMP062602-1
File: 062602g1 Transform: NO TRANSFORMATION

SUMMARY STATISTICS ON TRANSFORMED DATA TABLE 2 of 2

GRP	IDENTIFICATION	VARIANCE	SD	SEM	C.V. %
1	0	0.004	0.067	0.033	12.91
2	0.5	0.003	0.055	0.027	9.38
3	1	0.001	0.027	0.013	3.95
4	2	0.015	0.124	0.062	20.70
5	51	0.071	0.266	0.133	45.82
6	100	0.010	0.102	0.051	17.34

TITLE: OMP062602-1
FILE: 062602g1
TRANSFORM: NO TRANSFORMATION NUMBER OF GROUPS: 6

GRP	IDENTIFICATION	REP	VALUE	TRANS VALUE
1	0	1	0.4250	0.4250
1	0	2	0.5270	0.5270
1	0	3	0.5290	0.5290
1	0	4	0.5850	0.5850
2	0.5	1	0.5370	0.5370
2	0.5	2	0.6100	0.6100
2	0.5	3	0.5430	0.5430
2	0.5	4	0.6510	0.6510
3	1	1	0.7070	0.7070
3	1	2	0.7040	0.7040
3	1	3	0.6500	0.6500
3	1	4	0.6740	0.6740
4	2	1	0.7020	0.7020
4	2	2	0.4210	0.4210
4	2	3	0.6590	0.6590
4	2	4	0.6140	0.6140
5	51	1	0.6980	0.6980
5	51	2	0.7320	0.7320
5	51	3	0.7090	0.7090
5	51	4	0.1820	0.1820
6	100	1	0.4820	0.4820
6	100	2	0.6350	0.6350
6	100	3	0.5340	0.5340
6	100	4	0.7110	0.7110

DMP062602-:
File: 0626(2g1 Transform: NO TRANSFORMATION

STEEL'S MANY-ONE RANK TEST - Ho:Control<Treatment

GROUP	IDENTIFICATION	TRANSFORMED MEAN	RANK SUM	CRIT. VALUE	df	SIG
1	0	0.517				
2	0.5	0.585	24.00	10.00	4.00	
3	1	0.684	26.00	10.00	4.00	
4	2	0.599	22.00	10.00	4.00	
5	51	0.580	22.00	10.00	4.00	
6	100	0.591	22.00	10.00	4.00	

Critical values use k = 5, are 1 tailed, and alpha = 0.05

BIOLOGICAL MONITORING, INC.
Toxicity Test Condition Summary

Client: Omega Protein — Prepared by: Anthony Smith

NPDES Permit #: N/A

Experiment ID#: RT062702-1

Test Organism: Cypinodon variegatus

Test Type: Static Acute Reference Toxicant

Organism Age at Start of Test: 2 d

Sample Tested: Sodium Lauryl Sulfate

Sample Type: Product

Sample Preparation Dates and Times: 06/27/02 @ 0920

Sample Prepared by: A. Smith — Delivered by: N/A

Test Solution Renewal Frequency: N/A

Dilution Water Used: Synthetic Seawater 062502

Test Temperature: 25 ± 1°C

No. of Replicates per conc.: 2 — No. of Organisms per Replicate: 10

Feeding prior to test: Normal — Feeding Regime: Not fed

Chamber Size: 800 mL PP — Test Volume: 400 mL

Photo Period: 16h light/8h dark — Test Duration: 48 h

Start of Test: Date: 06/27/02 — Time: 1517

End of Test: Date: 06/29/02 — Time: 1423

Equipment:

- pH Meter: SA 720 (A)
- DO Meter: YSI 58 (b)
- SCT Meter: YSI 33 (A)
- °C Measurement: Calibrated Thermometer
- Salinity: SCT Meter
- Chlorine: Fisher/Porter Amperometric Titrator

Test Method Reference: U.S. EPA. 1993. Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms. EPA/600/4-90/027F.

BIOLOGICAL MONITORING, INC.
Acute Toxicity Test Data Summary

Client	Omega Protein	NPDES PERMIT #: N/A		
Test Organism	Cyprinodon variegatus		Date	Time
Experiment ID	RT091301-1	Start Test	06/27/02	1517
Sample Tested	Sodium Lauryl Sulfate	End Test	06/29/02	1423

RESULTS

Water Chemistry Analyses
(Range)

Conc. ppm	Temp. (°C)	D.O. (mg/L)	pH	Salinity (ppt)	Survival (%) 48 h.
0	25-26	6.0-7.4	7.9-8.0	19	100
1.25	25-26	5.6-7.5	7.8-8.0	19	65
2.5	25	4.9-7.5	7.7-7.9	19	0
5	25	4.7-7.4	7.6-7.9	19	0
10	25	4.4-7.5	7.6-7.9	19	0
20	25	4.2-7.3	7.5-7.9	19	0

STATISTICAL ANALYSES

Test Method	LC50 (ppm)	95% Fiducial (Confidence) Limits
Trimmed Spearman-Karber	1.467	N/A
COMMENTS:		

TOXICITY TEST DATA SHEET

Page ____ of ____

Experiment I.D. #: RT062702-1 NPDES Permit #: NA Project Scientist: [signature]

Client: BMI QC Officer: [signature]

Effluent/Sample: RT 062702-[illegible] Test Organism, Species: [illegible] Org. Batch #: ADS062502

Sample Container: Glass Number of Organisms per Concentration: 20 Age: 2 Days

Sample Type; Date and Time of Collection: Compound Dilution Water Used: SS062502 Batch #: ABS0621024

Grab: Date: ________ Time: ________ Test Temperature: 25 ± 1°C

Composite: From: Date: ________ Time: ________ To: Date: ________ Time: ________ Start of Test: Date: 062702 Time: 1517

Test Mode: ________ Test Duration: ________ End of Test: Date: 062902 Time: 1423

Conc of %	Test Conc #	Number of Live Organisms					Dissolved Oxygen (mg/L)					pH					Salinity 0/00					Temperature (°C)				
		0	24	48	72	96	0	24	48	72	96	0	24	48	72	96	0	24	48	72	96	0	24	48	72	96
0	A	10	10	10			7.4	6.0	6.1			7.9	8.0	7.9			19	19	19			25	25	26		
	B	10	10	10																						
1.25	A	10	10	4			7.5	5.8	5.6			7.9	8.0	7.8			19	19	19			25	25	26		
	B	10	10	9																						
2.5	A	10	0	–			7.5	4.9	–			7.9	7.7	–			19	19	–			25	25	–		
	B	10	0	–																						
5	A	10	0	–			7.4	4.7	–			7.9	7.6	–			19	19	–			25	25	–		
	B	10	0	–																						
10	A	10	0	–			7.5	4.4	–			7.9	7.6	–			19	19	–			25	25	–		
	B	10	0	–																						
20	A	10	0	–			7.3	4.2	–			7.9	7.5	–			19	19	–			25	25	–		
	B	10	0	–																						
Recorded By:		BA	MAS	BA			MAS	MAS	BA			MAS	MAS	BA			MAS	MAS	BA			MAS	MAS	BA		

* mg/L as $CaCO_3$

BIOLOGICAL MONITORING, INC.

Toxicity Test Procedure Check Sheet

Page ___ of ___

Test I.D.#: Permit # N/A Test Containers Used: PP ___ ___ 2

Specify below volume of diluent and effluent measured out per concentration in this test:

Concentration % mg/L other	Diluent(mLs)	Effluent(mLs)	Total(mLs)
0	1000	0	1000
1.25	987.5	12.5	1000
2.5	975	25	1000
5	950	50	1000
10	900	100	1000
20	800	200	1000

Are all test chambers properly labeled? ✓

Specify vessel type and volume used to measure and deliver effluent and diluent to test chambers:

Graduated cylinder(s) 2000 ___ 1000 ✓ 500 ___ 250 ✓

100 ✓ 50 ___ 25 ✓ 10 ___

Volumetric flask(s) 1000 ___ 500 ___ 200 ___ 100 ___

Pipet(s) 10 ___ 5 ___ 1 ___ Other ___

Specify material (s) used to place test organisms into test chambers: wide bore pipet

Total Chlorine of sample upon arrival (mg/L) <0.01 mg/L

Total Chlorine of sample after dechlorination (mg/L) N/A

Exposure Chamber
Total Vessel Capacity: 800 mL
Test Solution Volume: 400 mL
Water Depth Constant: X
Cyclic: ___

Feeding Schedule
Pretest Feeding: ___
Not fed: X
Fed Daily: ___
Fed irregularly (describe) ___
___
Type of Food: ___

Aeration
Pretest: ___
None: X
Slow: ___ (bubbles/min)
Moderate: ___
Vigorous: ___
Beginning: ___ (hour)

Screened Animal Enclosures
Not Used: X
Used: ___

Photoperiod:
16h/8h: X
other: ___

Organism pretest treatment
Normal

Conditions of surviving organisms at end of test: ___

Methods of Randomization employed: Random #

Comments: ___

BIOLOGICAL MONITORING, INC.
SUMMARY OF TEST STOCK SOLUTION PREPARATION

Client: BMI
Test ID Nos. RT 062702-1

STOCK A - MASTER STOCK SOLUTION

ID #: RT 062702-4161
Compound Type: Sodium Lauryl Sulfate
Weight of Compound: 0.10397g
Diluent Type: Synthetic Seawater
Volume of Diluent (units): 1000 mls
Final Concentration: 100 mg/L
Prepared By: [signature]
Date/Time: 062702 / 0920

Substock A - ID #: ______
Volume of Stock A: ______
Diluent Type: ______
Volume of Diluent: ______
Final Concentration: ______
Prepared By: ______
Date/Time: ______

Substock A - ID #: ______
Volume of Stock A: ______
Diluent Type: ______
Volume of Diluent: ______
Final Concentration: ______
Prepared By: ______
Date/Time: ______

Substock A - ID #: ______
Volume of Stock A: ______
Diluent Type: ______
Volume of Diluent: ______
Final Concentration: ______
Prepared By: ______
Date/Time: ______

Substock A - ID #: ______
Volume of Stock A: ______
Diluent Type: ______
Volume of Diluent: ______
Final Concentration: ______
Prepared By: ______
Date/Time: ______

CT-' DX: BINOMIAL, MOVING AVERAGE, PROBIT, AND SPEARMAN METHODS

SPEARMAN-KARBER

TRIM: 35.00%
LC50: 1.467
95% CONFIDENCE LIMITS
ARE UNRELIABLE.

C)NC. %	NUMBER EXPOSED	NUMBER DEAD	PERCENT DEAD	BINOMIAL PROB.(%)
1.25	20.	7.	35.00	.1316D+02
2.50	20.	20.	100.00	.9537D-04
5.00	20.	20.	100.00	.9537D-04
0.00	20.	20.	100.00	.9537D-04
0.00	20.	20.	100.00	.9537D-04

THE INOMIAL TEST SHOWS THAT .00 AND 2.50 CAN BE USED AS STATISTICALLY SOUND CONSERVATIVE 95 PERCENT CONFIDENCE LIMITS SINCE THE ACTUAL CONFIDENCE LEVEL ASSOCIATED WITH THESE LIMITS IS 99.9999 PERCENT.
AN A PROXIMATE LC50 FOR THIS DATA SET IS 1.413

WH N THERE ARE LESS THAN TWO CONCENTRATIONS AT WHICH THE PERCENT DEAD IS BETWEEN 0 AND 100, NEITHER THE M VING AVERAGE NOR THE PROBIT METHOD CAN GIVE ANY S TISCALLY SOUND RESULTS.

DATI : 6/27/02 TEST NUMBER: RT-1 DURATION: 48 hour
SAMPLI : Outfall 006 SPECIES: C. variegatus

METHC)	LC50	CONFIDENCE LIMITS LOWER	UPPER	SPAN
BINOI AL	1.413	.000	2.500	2.500
MAA	*******	*******	*******	*******
PROBI '	*******	*******	*******	*******
SPEAR AN	1.467	*******	*******	*******

**** , LIMIT DOES NOT EXIST

Omega Protein, Inc
VPDES Permit #VA0003887

Month of August 2002

Chesapeake Bay Water Quality Monitoring Data

	Predischarge							After Discharge						
Date	Time of Sample	BOD (mg/L)	DO (mg/L)	AMM (mg/L)	Temp C	pH SU	Salinity ppt	Time of Sample	BOD (mg/L)	DO (mg/L)	AMM (mg/L)	Temp C	pH (SU)	Salinity ppt
1														
2														
3														
4														
5														
6														
7														
8														
9														
10														
11														
12														
13														
14														
15														
16														
17														
18														
19														
20														
21														
22														
23														
24														
25														
26														
27														
28														
29														
30		<2		0.259			16.7		3.1		0.392			16.9
31														

Name of Vessel Reedville

Name of Sampler Tom Boyd

ZAPATA PROTEIN
REEDVILLE, VIRGNIA
DMR REPORTING

	LAGOON 002			DITCH 008		
DATE	pH 24	TEMP C	FLOW	pH 22	TEMP C	FLOW
08/01/02	7.48	29	116,500 1	7.98	29	4,420,420 1
08/02/02	7.59	30	66,100 2	8.15	34	4,933,800 2
08/03/02	7.54	30	100,900 3	8.11	33	11,841,120 3
08/04/02	7.51	30	180,200 4			
08/05/02	7.64	29	62,900 5			
08/06/02	7.29	30	39,400 6	7.98	38	8,020,560 4
08/07/02	7.47	28	212,000 7	7.65	32	11,841,120 5
08/08/02	6.78	28	143,500 8	7.8	33	2,466,900 6
08/09/02	7.22	26	203,700 9	7.84	32	1,973,520 7
08/10/02	7.12	28	109,400 10	7.98	31	11,841,120 8
08/11/02				7.16	32	1,973,520 9
08/12/02						
08/13/02	8.22	33	129,400 11	7.56	31	8,246,080 10
08/14/02	7.07	29	76,000 12	8.05	32	8,907,320 11
08/15/02	7.22	29	118,100 13	7.49	33	7,894,080 12
08/16/02	7.29	29	131,300 14	7.52	32	7,894,080 13
08/17/02	7.32	28	188,900 15	7.01	33	9,867,600 14
08/18/02	7.24	28	156,000 16			
08/19/02	7.37	30	21,100 17			
08/20/02	7.72	32	36,000 18	7.83	37	7,400,700 15
08/21/02	7.47	30	116,700 19	7.28	34	8,287,480 16
08/22/02	7.54	28	144,500 20	7.87	28	1,973,520 17
08/23/02	7.53	28	66,300 21	7.77	35	8,388,915 18
08/24/02	7.44	28	136,600 22	8.11	28	7,400,700 19
08/25/02	7.43	27	109,500 23			
08/26/02	7.47	27	51,800 24			
08/27/02	7.32	27	7,900 25	7.85	33	4,452,777 20
08/28/02	7.54	26	113,100 26	7.84	32	7,400,700 21
08/29/02	7.47	28	191,100 27	7.27	31	8,427,180 22
08/30/02	7.52	24	43,600 28			
08/31/02	7.51	29	28,400 29			
TOTAL	215.18	819	3.1523	168.57	713	146,852
AVG.	7.42	28.2	.109	7.66	32.4	6.675
MIN.	6.78	23	.008	6.95	28	1.974
MAX.	8.22	33	.212	8.15	38	11.841

BIOLOGICAL MONITOR   951 1481   08/08 '02 .:36 NO.625

SAMPLE COLLECTION - CHAIN OF CUSTODY. See reverse side for instructions.

To be completed by the person collecting the sample. See reverse side for instructions.

1. Client name Omega Protein
2. Sampler's name J.R. Hall
3. Sample source Lagoon Discharge
4. Outfall/station 002
5. Purchase order no. ______
6. Affiliation ______
7. ~~NPDES permit~~ no./County Northumberland Co
8. Test period for which data is being submitted:
9. Sample relinquished by: John A Hall / 7-23-02 Date; Received by: Anthony D. Tingo / 7/24/02 Date;
Sample relinquished by: ______ / ______ Date; Received by: ______ / ______ Date.

Description of Sampling Methods and Equipment

10. Type of sample collected:
Grab ______
Date collected ______
Time collected ______
Volume ______
Composite ✓
Composite type Continuous
Collection period: from 7-22-02 (date) 7 am (time) to 7-23-02 (date) 7 am (time)

11. Flow during sampling 41,600
12. Type of container 1 gal. plastic
13. Number of containers shipped 1
14. No. of subsamples ______
15. Frequency ______
16. Volume ______

Condition of Effluent at Time of Collection

17. pH 8.41 18. Chlorine ______
19. Temperature:
At collection point ______
In collection device (comp. sample must be @ or below 4°C) 4°C
20. Is the sample:
Chlorinated ______
Dechlorinated ______
Unknown ______
Dechlorination method ______

Shipping Information

21. Method of shipment UPS 22. Date shipped 7-23-02 23. Time Approx 2 pm
24. Was the sample packed with ice for shipment? yes
25. Custody seal in place by John A. Hall Date 7-23-02 Time 11:00 am

Instructions to Lab

26. Type of test(s) to be performed ______
27. Should BMI dechlorinate the sample (Yes or No) ______ 28. Should ammonia be measured? (Yes or No) ______
29. Comments ______
30. I certify that the above information is correct John A Hall (Signature) 7-23-02 (Date)

For BMI Use Only

Alk 1/4
Hard 1/4
BMI Sample ID# OMP072402-7 Received by A. Tingo Date 7/24/02 Time 1155
Upon arrival at BMI: Custody seal ✓ Temperature 2°C pH 8.4 Chlorine <0.01 DO 9.6
On ice? ✓ Salinity 20 ppt Conductivity 16000
Visual description Clear Sample refrigerated yes
Test ID number(s) OMP072402-2

C:\...\...\... R.11841

TITLE: OMP072402-2
FILE: omp072402
TRANSFORM: NO TRANSFORM NUMBER OF GROUPS: 2

GRP	IDENTIFICATION	REP	VALUE	TRANS VALUE
1	0	1	1.0000	1.0000
1	0	2	1.0000	1.0000
1	0	3	1.0000	1.0000
1	0	4	1.0000	1.0000
2	100	1	0.8000	0.8000
2	100	2	1.0000	1.0000
2	100	3	1.0000	1.0000
2	100	4	1.0000	1.0000

OMP072402-2
File: omp072402 Transform: NO TRANSFORM

SUMMARY STATISTICS ON TRANSFORMED DATA TABLE 1 of 2

GRP	IDENTIFICATION	N	MIN	MAX	MEAN
1	0	4	1.000	1.000	1.000
2	100	4	0.800	1.000	0.950

OMP072402-2
File: omp072402 Transform: NO TRANSFORM

SUMMARY STATISTICS ON TRANSFORMED DATA TABLE 2 of 2

GRP	IDENTIFICATION	VARIANCE	SD	SEM	C.V. %
1	0	0.000	0.000	0.000	0.00
2	100	0.010	0.100	0.050	10.53

OMP072402-2
File: omp072402 Transform: NO TRANSFORM

STEEL'S MANY-ONE RANK TEST - Ho:Control<Treatment

GROUP	IDENTIFICATION	TRANSFORMED MEAN	RANK SUM	CRIT. VALUE	df	SIG
1	0	1.000				
2	100	0.950	16.00	11.00	4.00	

Critical values use k = 1, are 1 tailed, and alpha = 0.05

ATTACHMENT C
DEPARTMENT OF ENVIRONMENTAL QUALITY
BMP Compliance Report

Facility Name: Omega Protein
Address: Reedville, Va.

VPDES Permit No.: VA0003867

Report Period: From 7/1/02 To 7/6/02

Paint Area	COMPLIANCE / NONCOMPLIANCE * (check as appropriate)	
	✓	

*Comments on Noncompliance no work done

Name of Principal Exec. Officer or Authorized Agent / Title

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. See 18 U.S.C. paragraph 1001 and 33 U.S.C. paragraph 1319. (Penalties under these statutes may include fines up to $10,000 and or maximum imprisonment of between 6 months and 5 years).

Signature of Principal Officer or Authorized Agent / Date

ATTACHMENT C
DEPARTMENT OF ENVIRONMENTAL QUALITY
BMP Compliance Report

Facility Name: Omega Protein
Address: Reedville, Va.

VPDES Permit No.: VA0003867

Report Period: From 7/7/02 To 7/13/02

Paint Area	COMPLIANCE (check as appropriate)	NONCOMPLIANCE*
	✓	

ATTACHMENT C
DEPARTMENT OF ENVIRONMENTAL QUALITY
BMP Compliance Report

Facility Name: Omega Protein
Address: Reedville, Va.

VPDES Permit No.: VA0003867

Report Period: From 7/14/02 To 7/20/02

Paint Area	COMPLIANCE (check as appropriate)	NONCOMPLIANCE*
	✓	

*Comments on Noncompliance No work done

Name of Principal Exec. Officer or Authorized Agent / Title

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. See 18 U.S.C. paragraph 1001 and 33 U.S.C. paragraph 1319. (Penalties under these statutes may include fines up to $10,000 and or maximum imprisonment of between 6 months and 5 years).

Signature of Principal Officer or Authorized Agent / Date

ATTACHMENT C
DEPARTMENT OF ENVIRONMENTAL QUALITY
BMP Compliance Report

Facility Name: Omega Protein
Address: Reedville, Va.

VPDES Permit No.: VA0003867

Report Period: From 7/21/02 To 7/27/02

Paint Area	COMPLIANCE (check as appropriate)	NONCOMPLIANCE * (check as appropriate)
	✓	

*Comments on Noncompliance

no work done

Name of Principal Exec. Officer or Authorized Agent / Title

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. See 18 U.S.C. paragraph 1001 and 33 U.S.C. paragraph 1319. (Penalties under these statutes may include fines up to $10,000 and or maximum imprisonment of between 6 months and 5 years).

Signature of Principal Officer or Authorized Agent / Date

ATTACHMENT C
DEPARTMENT OF ENVIRONMENTAL QUALITY
BMP Compliance Report

Facility Name: Omega Protein
Address: Reedville, Va.

VPDES Permit No.: VA0003867

Report Period: From 7/28/02 To 7/31/02

Paint Area	COMPLIANCE / NONCOMPLIANCE * (check as appropriate)	
	✓	

*Comments on Noncompliance

No work done

Name of Principal Exec. Officer or Authorized Agent / Title

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. See 18 U.S.C. paragraph 1001 and 33 U.S.C. paragraph 1319. (Penalties under these statutes may include fines up to $10,000 and or maximum imprisonment of between 6 months and 5 years).

Signature of Principal Officer or Authorized Agent / Date

OMEGA PROTEIN™

Graham Lyell Jett
General Manager

AUGUST 8, 2002

MS. DENISE MOSCA
DEPARTMENT OF ENVIRONMENTAL QUALITY
P.O.BOX 669
429 EAST CHURCH STREET
KILMARNOCK, VA. 22482

DMR EXCURSIONS JULY REPORT

DEAR DENISE:

DURING THE MONTH OF JULY WE EXPERIENCED FOUR EXCURSIONS THROUGH OUR OO6 OUTFALL. AS WE HAD STATED IN OUR LAST DMR REPORT WE WERE EXPECTING TO BE DISCHARGING THROUGH A DIFFUSER ON OUR "001" DISCHARGE AND FEEL THAT THESE OCCURANCES WOULD NOT HAVE HAPPENED UNDER THE CONDITIONS OF THE EXPECTED NEW PERMIT.

THE EXCURSION THROUGH THE 002 OUTFALL FOR AMMONIA WAS DUE TO THE SURGE TANK NOT BEING READY UPON START-UP OF OUR DISCHARGE. THIS CAUSED A HIGH DOSAGE OF ACIDIC CONDENSATE WATER TO BE DISCHARGED TO THE POND DURING CLEANING OPERATIONS OF OUR EVAPORATOR PLANT. DURING THESE ACIDIC TIMES THE DO IS AFFECTED AND THEREFOR THE BACTERIA AND AMMONIA IS AFFECTED. THIS TANK IS NOW COMPLETED AND NOW IN OPERATION.

SINCERELY,

Lyell Jett

LYELL JETT

cc: Bishop

P.O. Box 175, Reedville, Virginia 22539, Telephone 804-453-4211, Fax 804-453-4475

OMEGA PROTEIN

Graham Lyell Jett
General Manager

AUGUST 8, 2002

MS. DENISE MOSCA
DEPARTMENT OF ENVIRONMENTAL QUALITY
P.O.BOX 669
429 EAST CHURCH STREET
KILMARNOCK, VA. 22482

DMR EXCURSIONS JULY REPORT

DEAR DENISE:

DURING THE MONTH OF JULY WE EXPERIENCED FOUR EXCURSIONS THROUGH OUR 006 OUTFALL. AS WE HAD STATED IN OUR LAST DMR REPORT WE WERE EXPECTING TO BE DISCHARGING THROUGH A DIFFUSER ON OUR "001" DISCHARGE AND FEEL THAT THESE OCCURANCES WOULD NOT HAVE HAPPENED UNDER THE CONDITIONS OF THE EXPECTED NEW PERMIT.

THE EXCURSION THROUGH THE 002 OUTFALL FOR AMMONIA WAS DUE TO THE SURGE TANK NOT BEING READY UPON START-UP OF OUR DISCHARGE. THIS CAUSED A HIGH DOSAGE OF ACIDIC CONDENSATE WATER TO BE DISCHARGED TO THE POND DURING CLEANING OPERATIONS OF OUR EVAPORATOR PLANT. DURING THESE ACIDIC TIMES THE DO IS AFFECTED AND THEREFOR THE BACTERIA AND AMMONIA IS AFFECTED. THIS TANK IS NOW COMPLETED AND NOW IN OPERATION.

SINCERELY,

LYELL JETT

P.O. Box 175, Reedville, Virginia 22539, Telephone 804-453-4211, Fax 804-453-4475

COMMONWEALTH OF VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

Industrial Major 12 1999

DEPT. OF ENVIRONMENTAL QUALITY
(REGIONAL OFFICE)

Kilmarnock Regional Offic
P.O Box 669
429 East Church Street
Kilmarnock VA 22482
(804) 435-3181

NOTE: READ PERMIT AND GENERAL INSTRUCTIONS BEFORE COMPLETING THIS FORM.

PERMITTEE NAME/ADDRESS (INCLUDE FACILITY NAME/LOCATION IF DIFFERENT)

NAME Omega Protein, Inc.
ADDRESS P. O. Box 175
Reedville VA 22539

FACILITY Omega Protein

VA0003867	002
PERMIT NUMBER	DISCHARGE NUMBER

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	02	7	1	TO	02	7	31

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
001 FLOW	REPORTED	.158	.354		**********	**********	**********		-	CONT	MEAS
	PERMIT REQUIREMENT	NL	NL	MGD	**********	**********	**********			CONT	MEAS
002 PH	REPORTED	**********	**********		7.04	**********	7.89			1/D	GRAB
	PERMIT REQUIREMENT	**********	**********		6	**********	9.0	SU		2D/W	GRAB
003 BOD5	REPORTED	1.65	2.38		**********	**********	**********		0	2/M	24HC
	PERMIT REQUIREMENT	468	637	KG/D	**********	**********	**********			2/M	24HC
004 TOTAL SUS. SOLIDS	REPORTED	3.99	5.92		**********	**********	**********		0	2/M	24HC
	PERMIT REQUIREMENT	171	422	KG/D	**********	**********	**********			2/M	24HC
010 TEMPERATURE	REPORTED	**********	**********		**********	28.3	38			1/D	IS
	PERMIT REQUIREMENT	**********	**********		**********	NL	NL	C		1/DAY	IS
179 TOXICITY FINAL, ACUTE	REPORTED	**********	**********			**********	**********				
	PERMIT REQUIREMENT	**********	**********		100% EFF	**********	**********			1/3M	24HC
508 OIL & GREASE	REPORTED	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	0	[illegible]	GRAB
	PERMIT REQUIREMENT	27.6	50.9	KG/D	**********	**********	**********			2/M	GRAB
Ammonia - N	REPORTED	10.9	17.3	KG/D	-	49.9	53.2	mg/L	2	2/M	24HC
	PERMIT REQUIREMENT					38.0	45.3	mg/L		2/M	

ADDITIONAL PERMIT REQUIREMENTS OR COMMENTS

BYPASSES AND OVERFLOWS	TOTAL OCCURRENCES	TOTAL FLOW (M.G.)	TOTAL BOD5 (K.G.)

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KN[illegible] ... SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319. (Penalties under ... include fine up to $10,000 and/or maximum imprisonment of between 6 months and 5 years.)

OPERATOR IN RESPONSIBLE CHARGE			DATE		
TYPED OR PRINTED NAME	SIGNATURE	CERTIFICATE NO.	YEAR	MO.	DAY
PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT		TELEPHONE			
Graham Lyell Jett	Graham Lyell Jett	804-453 4211	02	08	09
TYPED OR PRINTED	ATURE	AREA CODE NUMBER	YEAR	MO.	DA

DEQ/PDES FORM 5

PERMITTEE NAME/ADDRESS(INCLUDE FACILITY NAME/LOCATION IF DIFFERENT)

NAME Omega Protein Reedville
ADDRESS PO Box 175
Reedville VA 22539
FACILITY LOCATION 610 Menhaden Rd

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF ENVIRONMENTAL QUALITY
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM(NPDES) DISCHARGE MONITORING REPORT(DMR)

Industrial Major 06/19/2002

DEPT. OF ENVIRONMENTAL QUALITY (REGIONAL OFFICE)
Kilmarnock Satellite Office
P.O Box 669
Church Street
Kilmarnock VA 22482

PERMIT NUMBER	DISCHARGE NUMBER
VA0003867	006

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	02	7	1	TO	02	7	31

NOTE. READ PERMIT AND GENERAL INSTRUCTIONS BEFORE COMPLETING THIS FORM.

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
001 FLOW	REPORTD	8.470	11.841		*********	*********	*********		-	CONT	EST
	REQRMNT	NL	NL	MGD	*********	*********	*********			CONT	EST
002 PH	REPORTD	*********	*********		7.25	*********	8.43		0	1/D	GRAB
	REQRMNT	*********	*********		6.0	*********	9.0	SU		3D/W	GRAB
003 BOD5	REPORTD	437	905		*********	*********	*********		0	3D/W	24HC
	REQRMNT	1755	3342	KG/D	*********	*********	*********			3D/W	24HC
004 TSS	REPORTD	413	1143		*********	*********	*********		0	3D/W	24HC
	REQRMNT	655	1609	KG/D	*********	*********	*********			3D/W	24HC
032 PHOSPHORUS, TOTAL (AS P)	REPORTD	5.74	5.80		*********	.223	.253		0	2/M	24HC
	REQRMNT	176.4	NL	KG/D	*********	2.0	NL	MG/L		2/M	24HC
033 NITROGEN, TOTAL AS N	REPORTD	144	195		*********	5.88	8.70		-	2/M	24HC
	REQRMNT	NL	NL	KG/D	*********	NL	NL	MG/L		2/M	24HC
010 CYANIDE, TOTAL (AS CN)	REPORTD				*********	250	440		2	2/M	GRAB
	REQRMNT	*********	*********		*********	1.54	2.00	UG/L		2/M	GRAB
039 AMMONIA, AS N	REPORTD				*********	5.46	8.23		2	2/M	24HC
	REQRMNT	*********	*********		*********	1.68	2.1	MG/L		2/M	24HC

ADDITIONAL PERMIT REQUIREMENTS OR COMMENTS

BYPASSES AND OVERFLOWS	TOTAL OCCURRENCES	TOTAL FLOW(M.G.)	TOTAL BOD5(K.G.)
	None		

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATED THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS TO THE BEST OF MY KNOWLEDGE AND BELIEF TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS. SEE 18 U.S.C. & 1001 AND 33 U.S.C. & 1319. (Penalties under these statutes may include fines up to $10,000 and/or maximum imprisonment of between 6 months and 5 years.)

OPERATOR IN RESPONSIBLE CHARGE

TYPED OR PRINTED NAME	SIGNATURE	CERTIFICATE NO.	DATE YEAR	MO.	DAY

PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TYPED OR PRINTED NAME	SIGNATURE	TELEPHONE	YEAR	MO.	DAY
Graham Lyell Jett	Graham Lyell Jett	804-453-4211	02	08	09

PERMITTEE NAME/ADDRESS(INCLUDE FACILITY NAME/LOCATION IF DIFFERENT)

NAME: Omega Protein Reedville
ADDRESS: PO Box 175
Reedville VA 22539
FACILITY LOCATION: 610 Menhaden Rd

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF ENVIRONMENTAL QUALITY
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM(NPDES)
DISCHARGE MONITORING REPORT(DMR)

Industrial Major 06/19/2002

DEPT. OF ENVIRONMENTAL QUALITY (REGIONAL OFFICE)
Kilmarnock Satellite Office
P.O Box 669
Church Street
Kilmarnock VA 22482

NOTE: READ PERMIT AND GENERAL INSTRUCTIONS BEFORE COMPLETING THIS FORM

PERMIT NUMBER	DISCHARGE NUMBER
VA0003867	006

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	02	7	1	TO	02	7	31

PARAMETER		QUANTITY OR LOADING AVERAGE	QUANTITY OR LOADING MAXIMUM	QUANTITY OR LOADING UNITS	QUALITY OR CONCENTRATION MINIMUM	QUALITY OR CONCENTRATION AVERAGE	QUALITY OR CONCENTRATION MAXIMUM	QUALITY OR CONCENTRATION UNITS	NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
080 TEMPERATURE, WATER (DEC. C)	REPORTD	**********	**********		**********	**********	36.0		0	1/D	IS
	REQRMNT	**********	**********		**********	**********	45.0	C		1/DAY	IS
500 OIL & GREASE	REPORTD	160	224		**********	**********	**********		0	3D/W	GRAB
	REQRMNT	372	685	KG/D	**********	**********	**********			3D/W	GRAB
	REPORTD										
	REQRMNT									*******	
	REPORTD										
	REQRMNT									*******	
	REPORTD										
	REQRMNT									*******	
	REPORTD										
	REQRMNT									*******	
	REPORTD										
	REQRMNT									*******	
	REPORTD										
	REQRMNT									*******	

ADDITIONAL PERMIT REQUIREMENTS OR COMMENTS

BYPASSES AND	TOTAL OCCURRENCES	TOTAL FLOW(M.G.)	TOTAL BOD5(K.G.)
	None		

CERTAIN UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS. SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319. (Penalties under these statutes may include fines up to $10,000 and/or maximum imprisonment of between 6 months and 5 years.)

OPERATOR IN RESPONSIBLE CHARGE			DATE		
TYPED OR PRINTED NAME	SIGNATURE	CERTIFICATE NO.	YEAR	MO.	DAY
PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT		TELEPHONE			
Graham Lyell Jett	Graham Lyell Jett	804-453-4111	02	08	09
TYPED OR PRINTED NAME	SIGNATURE		YEAR	MO.	DAY

COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

W. Tayloe Murphy, Jr.
Secretary of Natural Resources

PIEDMONT REGIONAL OFFICE
4949-A Cox Road
Glen Allen, Virginia 23060
(804) 527-5020
Fax (804) 527-5106
www.deq.state.va.us

Robert G. Burnley
Director

Gerard Seeley, Jr.
Piedmont Regional Director

August 13, 2002

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Lyell Jett
General Manager
Omega Protein
P.O. Box 175
Reedville, VA 22539

RE: VPDES Permit No. VA0003867 Omega Protein

Dear Mr. Jett:

Enclosed please find a new DMR form for outfalls 002, 003 and 006 showing the ammonia and cyanide limits that came effective upon the completion of the schedule of compliance in your VPDES permit. Please discard the DMR previously sent to you and insert this updated page in your permit.

In accordance with the permit, you are required to submit monitoring reports to the Kilmarnock Office. The reporting form which is enclosed supersedes any that you have received from this office and should be used from now on. You will be responsible for obtaining copies of the reporting form.

If you have any additional questions, please do not hesitate to contact us.

Sincerely,

Curtis J. Linderman, P.E.
Water Permits Manager

cc: DEQ-OWRM
EPA-Region III (3PW12)
VDH-RRO (2 copies)

Enclosures: DMR - Permit No. VA0003867

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF ENVIRONMENTAL QUALITY
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM(NPDES)
DISCHARGE MONITORING REPORT(DMR)

Industrial Major 06/26/2002

DEPT. OF ENVIRONMENTAL QUALITY
(REGIONAL OFFICE)
Kilmarnock Satellite Office
P.O Box 669
Church Street
Kilmarnock VA 22482

NOTE: READ PERMIT AND GENERAL INSTRUCTIONS BEFORE COMPLETING THIS FORM.

PERMITTEE NAME/ADDRESS(INCLUDE FACILITY NAME/LOCATION IF DIFFERENT)

NAME Omega Protein Reedville
ADDRESS PO Box 175
Reedville VA 22539
FACILITY LOCATION 610 Menhaden Rd

VA0003867	002
PERMIT NUMBER	DISCHARGE NUMBER

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM				TO			

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
001 FLOW	REPORTD				*********	*********	*********				
	REQRMNT	NL	NL	MGD	*********	*********	*********			CONT	MEAS
0 H	REPORTD	*********	*********			*********					
	REQRMNT	*********	*********		6.0	*********	9.0	SU		2D/W	GRAB
003 BOD5	REPORTD				*********	*********	*********				
	REQRMNT	468	837	KG/D	*********	*********	*********			2/M	24HC
004 TSS	REPORTD				*********	*********	*********				
	REQRMNT	171	422	KG/D	*********	*********	*********			2/M	24HC
039 AMMONIA, AS N	REPORTD	*********	*********		*********						
	REQRMNT	*********	*********		*********	38.0	45.3	MG/L		2/M	24HC
080 TEMPERATURE, WATER (DEG. C)	REPORTD	*********	*********		*********						
	REQRMNT	*********	*********		*********	NL	NL	C		1/DAY	IS
379 TOXICITY, FINAL, ACUTE	REPORTD	*********	*********			*********	*********				
	REQRMNT	*********	*********		100	*********	*********	NOAEC		1/3M	24HC
500 OIL & GREASE	REPORTD				*********	*********	*********				
	REQRMNT	27.6	50.9	KG/D	*********	*********	*********	MG/L		2/M	GRAB

ADDITIONAL PERMIT REQUIREMENTS OR COMMENTS

BYPASSES AND OVERFLOWS	TOTAL OCCURRENCES	TOTAL FLOW(M.G.)	TOTAL BOD5(K.G.)

CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS TO THE BEST OF MY KNOWLEDGE AND BELIEF TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS. SEE 18 U.S.C. & 1001 AND 33 U.S.C. & 319. (Penalties under these statutes may include fines up to $10,000 and/or maximum imprisonment of between 6 months and 5 years.)

OPERATOR IN RESPONSIBLE CHARGE			DATE		
TYPED OR PRINTED NAME	SIGNATURE	CERTIFICATE NO.	YEAR	MO.	DAY
PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT		TELEPHONE			
TYPED OR PRINTED NAME	SIGNATURE		YEAR	MO.	DAY

THIS REPORT IS REQUIRED BY LAW (33 U. S. C. § 1318 40 CFR 122.60). FAILURE TO REPORT OR FAILURE TO REPORT TRUTHFULLY CAN RESULT IN CIVIL PENALTIES NOT TO EXCEED $10,000 PER DAY OF VIOLATION: OR IN CRIMINAL PENALTIES NOT TO EXCEED $25,000 PER DAY OF VIOLATION OR BY IMPRISONMENT FOR NOT MORE THAN FIVE YEARS, OR BOTH.

GENERAL INSTRUCTIONS

1. Complete this form in permanent ink or indelible pencil.
2. Be sure to enter the dates for the first and last day of the period covered by the report on the form in the space marked "Monitoring Period".
3. For those parameters where the "permit requirement" spaces are blank or a limitation appears, provide data in the "reported" spaces in accordance with your permit.
4. Enter the average and, if appropriate, maximum quantities and units in the "reported" spaces in the columns marked "Quantity or Loading". KG/DAY = Concentration(mg/l) x Flow(MGD) x 3.785.
5. Enter maximum, minimum, and/or average concentrations and units in the "reported" spaces in the columns marked "Quality or Concentration".
6. Enter the number of samples which do not comply with the maximum and /or minimum permit requirements in the "reported" space in the column marked "No. Ex.".
7. Enter the actual frequency of analysis for each parameter (number of times per day, week, month) in the "reported" space in the column marked "Frequency of Analysis".
8. Enter the actual type of sample collected for each parameter in the "reported" space in the column marked "Sample Type".
9. Enter additional required data or comments in the space marked "additional permit requirements or comments".
10. Record the number of bypasses during the month, the total flow in million gallons and BOD5 in kilograms in the proper columns in the section marked "Bypasses and Overflows".
11. The operator in responsible charge of the facility should review the form and sign in the space provided. If the plant is required to have a licensed operator, the operator's certificate number should be reported in the space provided.
12. The principal executive officer should then review the form and sign in the space provided and provide a telephone number where he/she can be reached.
13. You are required to sample at the frequency and type indicated in your permit.
14. Send the completed form to your Dept. of Environmental Quality Regional Office by the 10th of each month.
15. You are required to retain a copy of the report for your records.
16. Where violations of permit requirements are reported, attach a brief explanation in accordance with the permit requirements describing causes and corrective actions taken. Reference each violation by date.
17. If you have any questions, contact the Dept. of Environmental Quality Regional Office.

ERMITTEE NAME/ADDRESS(INCLUDE
ACILITY NAME/LOCATION IF DIFFERENT)

AME Omega Protein Reedville
DDRESS PO Box 175
Reedville VA 22539

ACILITY 610 Menhaden Rd
OCATION

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF ENVIRONMENTAL QUALITY
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM(NPDES)
DISCHARGE MONITORING REPORT(DMR)

Industrial Major 06/26/2002

DEPT. OF ENVIRONMENTAL QUALITY
(REGIONAL OFFICE)

Kilmarnock Satellite Office
P.O Box 669
Church Street
Kilmarnock VA 22482

NOTE: READ PERMIT AND GENERAL INSTRUCTIONS BEFORE COMPLETING THIS FORM.

VA0003867	003
PERMIT NUMBER	DISCHARGE NUMBER

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM				TO			

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
001 FLOW	REPORTD				*********	*********	*********				
	REQRMNT	NL	NL	MGD	*********	*********	*********			CONT	EST
00	REPORTD	*********	*********			*********					
	REQRMNT	*********	*********		6.0	*********	9.0	SU		2/M	GRAB
003 BOD5	REPORTD				*********	*********	*********				
	REQRMNT	4296	7710	KG/D	*********	*********	*********			2/M	24HC
004 TSS	REPORTD				*********	*********	*********				
	REQRMNT	114	282	KG/D	*********	*********	*********			2/M	24HC
007 DO	REPORTD	*********	*********				*********				
	REQRMNT	*********	*********		NL	NL	*********	MG/L		1/DAY	GRAB
039 AMMONIA, AS N	REPORTD	*********	*********		*********						
	REQRMNT	*********	*********		*********	39.6	49.0	MG/L		2/M	24HC
080 TEMPERATURE, WATER (DEG. C)	REPORTD	*********	*********		*********						
	REQRMNT	*********	*********		*********	NL	NL	C		1/DAY	IS
50 OIL & GREASE	REPORTD				*********	*********	*********				
	REQRMNT	426	784	KG/D	*********	*********	*********			2/M	GRAB

ADDITIONAL PERMIT REQUIREMENTS OR COMMENTS

BYPASSES AND OVERFLOWS	TOTAL OCCURRENCES	TOTAL FLOW(M.G.)	TOTAL BOD5(K.G.)

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS TO THE BEST OF MY KNOWLEDGE AND BELIEF TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS. SEE 18 U.S.C. & 1001 AND 33 U.S.C. & 1319. (Penalties under these statutes may include fines up to $10,000 and/or maximum imprisonment of between 6 months and 5 years.)

OPERATOR IN RESPONSIBLE CHARGE			DATE		
TYPED OR PRINTED NAME	SIGNATURE	CERTIFICATE NO.	YEAR	MO.	DAY
PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT		TELEPHONE			
TYPED OR PRINTED NAME	SIGNATURE		YEAR	MO.	DAY

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COMMONWEALTH OF VIRGINIA
DEPARTMENT OF ENVIRONMENTAL QUALITY
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM(NPDES)
DISCHARGE MONITORING REPORT(DMR)

Industrial Major 06/27/2002

ERMITTEE NAME/ADDRESS(INCLUDE
ACILITY NAME/LOCATION IF DIFFERENT)

AME Omega Protein Reedville
DDRESS PO Box 175
Reedville VA 22539

ACILITY 610 Menhaden Rd
OCATION

VA0003867	006
PERMIT NUMBER	DISCHARGE NUMBER

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM				TO			

DEPT. OF ENVIRONMENTAL QUALITY
(REGIONAL OFFICE)

Kilmarnock Satellite Office
P.O Box 669
Church Street
Kilmarnock VA 22482

NOTE: READ PERMIT AND GENERAL INSTRUCTIONS BEFORE COMPLETING THIS FORM.

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
001 FLOW	REPORTD				*********	*********	*********				
	REQRMNT	NL	NL	MGD	*********	*********	*********			CONT	EST
00	REPORTD	*********	*********			*********					
	REQRMNT	*********	*********		6.0	*********	9.0	SU		3D/W	GRAB
003 BOD5	REPORTD				*********	*********	*********				
	REQRMNT	1755	3142	KG/D	*********	*********	*********			3D/W	24HC
004 TSS	REPORTD				*********	*********	*********				
	REQRMNT	655	1609	KG/D	*********	*********	*********			3D/W	24HC
012 PHOSPHORUS, TOTAL (AS P)	REPORTD				*********						
	REQRMNT	178.4	NL	KG/D	*********	2.0	NL	MG/L		2/M	24HC
013 NITROGEN, TOTAL AS N	REPORTD				*********						
	REQRMNT	NL	NL	KG/D	*********	NL	NL	MG/L		2/M	24HC
018 CYANIDE, TOTAL (AS CN)	REPORTD				*********						
	REQRMNT	********	********		*********	1.54	2.00	UG/L		2/M	GRAB
039 AMMONIA, AS N	REPORTD				*********						
	REQRMNT	********	********		*********	1.68	2.1	MG/L		2/M	24HC

ADDITIONAL PERMIT REQUIREMENTS OR COMMENTS

BYPASSES AND OVERFLOWS	TOTAL OCCURRENCES	TOTAL FLOW(M.G.)	TOTAL BOD5(K.G.)

CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS TO THE BEST OF MY KNOWLEDGE AND BELIEF TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS. SEE 18 U.S.C. & 1001 AND 33 U.S.C. & 1319. (Penalties under these statutes may include fines up to $10,000 and/or maximum imprisonment of between 6 months and 5 years.)

OPERATOR IN RESPONSIBLE CHARGE			DATE		
TYPED OR PRINTED NAME	SIGNATURE	CERTIFICATE NO.	YEAR	MO.	DAY
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NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM(NPDES)
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Industrial Major 06/27/2002

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	YEAR	MO	DAY		YEAR	MO	DAY
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		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
80 TEMPERATURE, WATER DEG. C)	REPORTD	*********	*********		*********	*********					
	REQRMNT	*********	*********		*********	*********	45.0	C		1/DAY	IS
0[illegible] & GREASE	REPORTD				*********	*********	*********				
	REQRMNT	372	685	KG/D	*********	*********	*********			3D/W	GRAB
	REPORTD										
	REQRMNT									*******	
	REPORTD										
	REQRMNT									*******	
	REPORTD										
	REQRMNT									*******	
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	REPORTD										
	REQRMNT									*******	

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TOXICITY TESTS
FOR
OMEGA PROTEIN

Submitted to:

Mr. Lyell Jett
Omega Protein
P.O. Box 175
Reedville, VA 22539

Prepared by:

Biological Monitoring, Inc.
1800 Kraft Drive, Suite 101
Blacksburg, VA 24060

Phone: 540-953-2821
Fax: 540-951-1481
www.biomon.com

October 1, 2002

The following data have been internally reviewed and the personnel meticulously followed the methods. The procedures are deemed to be compliant with the methods and acceptable for reporting.

Anthony Smith (Laboratory Manager)

BIOLOGICAL MONITORING, INC.
Toxicity Test Condition Summary

Client: Omega Protein — Prepared by: Anthony Smith

NPDES Permit #: VA0003867

Experiment ID#: OMP092502-2

Test Organism: Mysidopsis bahia

Test Type: Static Acute

Organism Age at Start of Test: 1 d

Sample Tested: Outfall 002

Sample Type: Composite

Sample Collection Frequency and Dates and Times: From 09/23/02 @ 0700 to 09/24/02 @ 0700

Sample Collector: Andy Hall — Delivered by: UPS

Test Solution Renewal Frequency: N/A

Dilution Water Used: SS092402

Test Temperature: 25 ± 1°C

No. of Replicates per conc.: 4 — No. of Organisms per Replicate: 5

Feeding prior to test: Normal — Feeding Regime: 2x daily

Chamber Size: 800 mL PP — Test Volume: 350 mL

Photo Period: 16h light/8h dark — Test Duration: 48 h

Start of Test: Date: 09/25/02 — Time: 1627

End of Test: Date: 09/27/02 — Time: 1545

Equipment:

pH Meter: SA 720 (A)
DO Meter: YSI 58 (b)
SCT Meter: YSI 33 (A)
°C Measurement: Calibrated Thermometer
Salinity: SCT Meter
Chlorine: Fisher/Porter Amperometric Titrator

Test Method Reference: U.S. EPA. 1993. Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms. EPA/600/4-90/027F.

ACUTE TEST DATA REVIEW CHECKLIST

ermit Number VA 0003867 Outfall 002 Permittee Omega

Test Date 9/25-27/02 Period Reviewed: QT ✓ SA ___ AN ___ Other ___
1st ___ 2nd ___ 3rd ✓ 4th ___

Testing Laboratory RMT

#	ACUTE DATA PARAMETER - (Some are organism specific)	YES	NO
1.	Was the test performed as per schedule?	✓	
2.	Was the correct test performed?	✓	
3.	**Was the correct type of sample used?**	✓	
4.	Were pH, temp, Cl of sample checked at sample site (or within 15 minutes of sample retrieval)?		✓ [illegible] site [illegible]
5.	**Was the sample packed in ice and chilled to ≤4° C for transport? NOTE: Frozen samples are not valid!**	✓	
6.	Were pH, DO, Cl, temperature and sample description recorded upon receipt?	✓	
7.	Does description (visual, scent) of sample (when received at lab) seem typical for this type of facility?	✓	
8.	**Was the test initiated within 36 hours of sample retrieval from sampler?**	✓	[illegible] sample retrieval
9.	a. Was the sample DO ≥ 4.0 mg/l and ≤ saturation at 25° C prior to test initiation? (applies to *D. pulex, C. dubia, M. bahia, P. promelas, C. variegatus*) b. Was the sample DO ≥ 6.0 mg/l and ≤ saturation at 12° C prior to test initiation? (applies to *O. mykiss*)		*variegatus*)
10.	If 9 is "NO", was the DO adjusted to the acceptable range (see a. and b. above) prior to test initiation?	✓	
11.	If the sample had a chlorine residual, was it dechlorinated?	NA	
12.	**Did the permit allow for dechlorination of the sample? (Only if it contains a compliance schedule for Cl limit or for dechlorination)**	NA	
13.	If the sample was dechlorinated, were controls treated with the same amount of dechlorination agent and run with untreated controls? (determines adverse effect of agent)	NA	
14.	Was the sample pH within the 6.0 - 9.0 range?	✓	
15.	**Was the age of the organisms in the correct range at test initiation?** *a.* ***P. promelas and C. variegatus* - 1-14 days old, within 24 hours of age of each other** *b.* ***O. mykiss* - 15-30 days old** *c.* ***D. pulex and C. dubia* - <24 hours old** *d.* ***M. bahia* - 1-5 days old, within 24 hours of age of each other**	✓	
16.	Were 5 geometric test concentrations (preferably 0.5 series) and 1 control set up? NA permit specifies 100% + control	—	
17.	Was the test chamber size acceptable? *a.* *P. promelas, C. variegatus, M. bahia* - 250 ml minimum *b.* *O. mykiss* - 5000 ml minimum *c.* *D. pulex and C. dubia* - 30 ml minimum 800 ml	✓	
18.	Was the sample volume acceptable? *a.* *P. promelas, C. variegatus, M. bahia* - 200 ml minimum 350 ml *b.* *O. mykiss* - 4000 ml minimum *c.* *D. pulex* - 25 ml minimum	✓	

#	ACUTE DATA PARAMETER - (Some are organism specific)	YES	NO
	d. *C. dubia* - 15 ml minimum		
19.	Was the minimum number of replicates per concentration represented? permit specifies *a.* 2 replicates - *P. promelas, O. mykiss* *C. variegatus, M. bahia* *b.* 4 replicates - *D. pulex, C. dubia*	4 - OK	
20.	Was the minimum number of organisms in each replicate? permit specifies *a.* 10 organisms - *P. promelas, O. mykiss* *C. variegatus, M. bahia* *b.* 5 organisms - *D. pulex, C. dubia*	20 - OK	
21.	a. Was the dilution water synthetic moderately hard water or 20% DMW? (applies to freshwater species *P. promelas, O. mykiss, D. pulex, C. dubia)* b. Was the dilution water synthetic moderately hard water or 20% DMW that had been adjusted to 20 2 ppt, or the same salinity as the receiving water? (applies to salt water species, *C. variegatus, M. bahia)*		✓ SS092402
22.	Was the dilution water hardness within the 80-100 mg $CaCO_3$/L?		?
23.	Was the dilution water hardness within the 60-70 mg $CaCO_3$/L?		?
24.	Was the dilution water pH within the range of 7.4 – 7.8 (7.9 – 8.3 for mineral water)?	✓	
25.	**a. Was the test temperature 25±1° C upon initiation, and throughout the test? (applies to *P. romelas, D. pulex, C. dubia C. variegatus, M. bahia)*** **b. Was the test temperature 12±1° C upon initiation, and throughout the test? (applies to *O. ykiss)***	✓	
26.	**Was the temperature measured daily in one replicate of each concentration?**	✓	
27.	Was the DO measured daily in one replicate of each concentration? (Exceptions to this requirement are for tests using *D. pulex* or *C. dubia*, where the 24-hr DO reading can be omitted to prevent organism stress.)	✓	
28.	If the DO dropped to <4.0 mg/l, was aeration initiated? (Exceptions to this requirement are for tests *using D. pulex or C. dubia*, where aeration is impractical.)	NA	
29.	If aeration was necessary (and acceptable), were all test chambers aerated for the duration of the test, and the time at which aeration was initiated recorded?	NA	
30.	If aeration was necessary (and acceptable), was it applied at a maximum rate of 100 bubbles/minute so as not to cause injury to the organisms?	NA	
31.	Was pH measured at the beginning and end of the test (daily is optimal) for a 48-hour test, or at 0, 48 hours, after renewal, and at 96 hours for a 96-hour test in one replicate of each sample concentration?	✓	
32.	a. For a freshwater test, was conductivity measured at the beginning and end (also at renewal for 96-our tests) of the test in one replicate of each concentration? (applies to freshwater species *P. promelas, O. ykiss, D. pulex, C. dubia)* b. For a saltwater test, was salinity measured at the beginning and end (also at renewal for 96-hour sts) of the test in one replicate of each concentration? (applies to salt water species, *C. variegatus, M. ahia)* daily	✓	
33.	For freshwater tests, was the alkalinity measured in 100% effluent and the control at the beginning of the test?	NA	
34.	For freshwater tests, was the hardness measured in 100% effluent and the control at the beginning of the test?	NA	
35.	a. For a test using *Mysidopsis bahia*, were the mysids fed *Artemia* nauplii daily? 2x daily b. For a 96-hour test using either *Pimephales promelas* or *Cyprinodon variegatus*, were the larvae ed prior to sample renewal at 48 hours?	✓	
36.	For a 96-hour test using either *Pimephales promelas* or *Cyprinodon variegatus*, was the sample used for	NA	

#	ACUTE DATA PARAMETER - (Some are organism specific)	YES	NO
	renewal the original sample?		
37.	Was the daily photoperiod 16 hours light/8 hours dark?	✓	
38.	Were the surviving organisms counted daily in all test chambers?	✓	
39.	Was the test terminated at 48±1 hours (less than 47 hours invalidates the test) or 96±1 hours (less than 95 hours invalidates the test)?	✓	
40.	Was the percent survival in each concentration recorded at the end of the test?	✓	
41.	**Was the percent survival in the controls ≥90%?**	✓	
42.	Was the LC_{50} correctly determined?	✓	
43.	If the acute test was run in conjunction with a chronic test using the same species, was the acute test initiated with the second or third sample pulled for the chronic test? (Any sample other than the same sample used to initiate the chronic test is acceptable.)	NA	

Items in bold type (and shaded) are significant in that if they are answered "NO", the test is automatically deemed "not acceptable" and must be repeated to fulfill permit TMP requirements. Bold type items are numbers 3, 5, 8, 12, 15, 25, 26, and 41.

RESPONSE GUIDE

1. - 8.	Response should be "YES" or note the problem in the review
9. - 10.	If 9. is "NO", then 10. must be "YES" or the test is not acceptable
11. - 13.	If 11. is "YES", then 12. and 13. must be "YES" or the test is not acceptable
14. - 17.	If 14. is "NO", then 15., 16. and 17 must be "YES" or the test is not acceptable
18. - 43.	Response should be "YES" or note the problem in the review

RATING

ACCEPTABLE	NOT ACCEPTABLE

Comments

BIOLOGICAL MONITORING, INC.
Acute Toxicity Test Data Summary

Client	Omega Protein	**NPDES PERMIT #:** VA0003867		
Test Organism	Mysidopsis bahia		**Date**	**Time**
Experiment ID	OMP092502-2	**Start Test**	09/25/02	1627
Sample Tested	Outfall 002	**End Test**	09/27/02	1545

RESULTS

Water Chemistry Analyses
(Range)

Conc. %	Temp. (°C)	D.O. (mg/L)	pH	Salinity (ppt)	Survival (%) 48 h
0	25	5.6-6.3	7.8-7.9	25	100
100	25	5.6-6.4	8.0-8.1	25	100

STATISTICAL ANALYSES

Test Method	NOAEC
Steel's Many One Rank Sum	**100%**
COMMENTS:	

BIOLOGICAL MONITORING , INC.
TOXICITY TEST DATA SHEET

Experiment I.D. #: OMP 092502-2
Effluent/Sample: OMP 092502-1
NPDES#: VA0003867
Sample Container: PE
Client: Omega Protein
Project Scientist: [signature]
Outfall/Station No. 002
QC Officer: [signature]

Sample Type:
Grab: ____
Collection Date: ____ Time: ____
Composite: ✓
Collected From: Date: 092302 Time: 0700
Collected To: Date: 092402 Time: 0700

Test Organism:
Species: ***Mysidopsis bahia***
Source: ABS
Batch#: ABS 092402
Age: 1 Day
No. of organisms/con. 20

Test Mode: Static Acute
Test Duration: 48h
Test Start Date: 9/25/02 Time: 1627
Test End Date: 9/27/02 Time: 1545
Test Temperature: 25±1°C
Waterbath/Shelf#: 1 / 2
Dilution Water Used: SS 092402
Temp. of Org. Stock Solution: 25°C

Con. (%) or mg/L	Test Cont. #	Number of Live Organisms					Dissolved Oxygen (mg/L)					pH					Salinity 0/00					Temperature (°C)				
		0	24	48	72	96	0	24	48	72	96	0	24	48	72	96	0	24	48	72	96	0	24	48	72	96
0	A	5	5	5			6.3	5.6	5.8			7.8	7.9	7.9			25	25	25			25	25	25		
	B	5	5	5																						
	C	5	5	5																						
	D	5	5	5																						
100	A	5	5	5			6.4	5.6	5.7			8.0	8.1	8.0			25	25	25			25	25	25		
	B	5	5	5																						
	C	5	5	5																						
	D	5	5	5																						
Recorded By:		BAM	BAM	BA			BAM	BAM	BA			BAM	BAM	BA			BA	BAM					BAM	BA		

BIOLOGICAL MONITORING , INC.
Toxicity Test Procedure Check Sheet

Page _____ of _____

Test I.D. #: OMP092502-2 Test containers used: P.P.

No. of replicates per concentration: 4

Are all test chambers properly labeled? yes

Specify vessel type and volume used to measure and deliver effluent and diluent to test chambers:

graduated cylinder (s): 2000 pipet (s): _____

volumetric flask (s): _____ other _____

Specify below no. milliliters (mLs) of diluent and effluent measured out per concentration in this test:

Concentration (%) mg/L Other	Diluent	Effluent	Total
0	1500	0	1500
100	0	1500	1500

Specify material (s) used to place test organisms into test chambers: wide bore pipet

Total Chlorine of sample upon arrival (mg/L): <0.01

Total Chlorine of sample after dechlorination (mg/L): NA

Pretest treatment for organisms: Normal

Exposure Chamber
Total vessel capacity: 800 mL
Test solution volume: 350 mL
Water Depth Constant: ✓
Cyclic: _____

Feeding schedule
Pretest feeding: _____
Not fed: _____
Fed daily: 2x
Fed irregularly (describe) _____
Type of food: live rinsed artemia

Aeration
Pretest: _____
None: ✓
Slow: _____ (bubbles/min)
Moderate: _____
Vigorous: _____
Beginning: _____ (hour)

Screened Animal Enclosures
Not used: ✓
Used: _____
Photoperiod:
8h/16h: ✓
Other: _____

Conditions of surviving organisms at end of test: Normal

Methods of randomization employed: Random #

Comments: _____

10979

SAMPLE COLLECTION - CHAIN OF CUSTODY FORM

To be completed by the person collecting the sample. See reverse side for instructions.

1. Client name OMEGA PROTEIN
2. Sampler's name ANDY HALL
3. Sample source Outfall Lagoon
4. Outfall/station 002
5. Purchase order no. _____
6. Affiliation Prod. MANAGER
7. NPDES permit no./County VA0003867
8. Test period for which data is being submitted:

9. *Sample relinquished by:* ANDY HALL / 9/24/02 *Date; Received by:* Benjamin A. Mackey / 9/25/02 *Date;*

Sample relinquished by: _____ / _____ *Date; Received by:* _____ / _____ *Date.*

Description of Sampling Methods and Equipment

10. Type of sample collected:
Grab _____
Date collected _____
Time collected _____
Volume _____
Composite ✓
Composite type _____
Collection period: from 9-23-02 (date) 7:00 AM (time) to 9-24-02 (date) 7:00 AM (time)

11. Flow during sampling 145,400
12. Type of container 1 GAL. PLASTIC
13. Number of containers shipped 1
14. No. of subsamples _____
15. Frequency _____
16. Volume _____

Condition of Effluent at Time of Collection

17. pH 7.44 18. Chlorine _____
19. Temperature:
At collection point _____
In collection device (comp. sample must be @ or below 4°C) _____
20. Is the sample:
Chlorinated _____
Dechlorinated _____
Unknown _____
Dechlorination method _____

Shipping Information

21. Method of shipment HRS 22. Date shipped 9/24/02 23. Time Approx 2:30 PM
24. Was the sample packed with ice for shipment? yes
25. *Custody seal in place by* J.R HALL *Date* 9/24/02 *Time* 1:00 PM

Instructions to Lab

26. Type of test(s) to be performed _____
27. Should BMI dechlorinate the sample (Yes or No) ____ 28. Should ammonia be measured? (Yes or No) _____
29. Comments _____

30. I certify that the above information is correct [signature] Signature 9/24/02 Date

****

For BMI Use Only

Alk NA
Hard NA
BMI Sample ID# OMP 090502-1 *Received by* Benjamin A. Mackey *Date* 9/25/02 *Time* 11:30
Upon arrival at BMI: Custody seal ✓ Temperature 8°C pH 8.3 Chlorine < 0.01 mg/L DO 11.8
On ice? ✓ Salinity 23ppt Conductivity 15000
Visual description Clear, Odorless Sample refrigerated yes
Test ID number(s) OMP 090502-2

OMP092502-2
File: 09 Transform: ARC SINE(SQUARE ROOT(Y))

Shapiro - Wilk's test for normality

D = 0.000

W = 0.000

Critical W (P = 0.05) (n = 8) = 0.818
Critical W (P = 0.01) (n = 8) = 0.749

Data FAIL normality test. Try another transformation.

Warning - The F-test of homogeneity is sensitive to non-normal data and should not be performed.

TITLE: OMP092502-2
FILE: 09
TRANSFORM: NO TRANSFORM NUMBER OF GROUPS: 2

GRP	IDENTIFICATION	REP	VALUE	TRANS VALUE
1	0	1	1.0000	1.0000
1	0	2	1.0000	1.0000
1	0	3	1.0000	1.0000
1	0	4	1.0000	1.0000
2	100	1	1.0000	1.0000
2	100	2	1.0000	1.0000
2	100	3	1.0000	1.0000
2	100	4	1.0000	1.0000

OMP092502-2
File: 09 Transform: NO TRANSFORM

SUMMARY STATISTICS ON TRANSFORMED DATA TABLE 1 of 2

GRP	IDENTIFICATION	N	MIN	MAX	MEAN
1	0	4	1.000	1.000	1.000
2	100	4	1.000	1.000	1.000

OMP092502-2
File: 09 Transform: NO TRANSFORM

SUMMARY STATISTICS ON TRANSFORMED DATA TABLE 2 of 2

GRP	IDENTIFICATION	VARIANCE	SD	SEM	C.V. %
1	0	0.000	0.000	0.000	0.00
2	100	0.000	0.000	0.000	0.00

OMP092502-2
File: 09 Transform: NO TRANSFORM

STEEL'S MANY-ONE RANK TEST - Ho:Control<Treatment

GROUP	IDENTIFICATION	TRANSFORMED MEAN	RANK SUM	CRIT. VALUE	df	SIG
1	0	1.000				
2	100	1.000	18.00	11.00	4.00	

Critical values use k = 1, are 1 tailed, and alpha = 0.05

№ 11203

BMI BIOLOGICAL MONITORING, INC.
LABORATORY WORK ORDER

Project Manager: A. Smith

Date: 9/25/02

Assigned to: _____

Test Start Date: 9/25/02

Client: Omega Protein

Client's P.O.#: _____

Test ID#: OMP092502-2

BMI Project #: 3291

Test Description: SAM6

Test Prefix: OMP

Test Conditions (Circle Appropriate Choice)

(Acute)/Chronic

Organism: P.p., D.p., D.m., C.d., (M.b.), C.v., H.a., Ct

Toxicant: 002

Other: _____

Permit No.#: VA 0003867

Duration: 24h, (48h), 96h, 7d, 3 brood _____

Test Vol: 350 ml

Renew at: 24h, 48h, 96h, daily, (none) _____

Chamber: 800ml

Concentrations: [0, 6.25, 12.5, 25, 50, 100%]

IWC: _____

(Other): 0, 100 %

Replicates: 1, 2, 3, (4), 8, 10

Other: _____

Diluent: MHRW, Surface, (Synthetic Seawater)

Temperature: 12 ± 1°C, 20 ± 1°C, 23 ± 1°C, (25 ± 1°C)

Test Salinity: Freshwater, 13 ppt, (20 ppt)

Feeding: 1 x daily, (2 x daily), 3 x daily, none, as specified _____

Dechlorination Sample: Yes/(No) (Circle One)

pH Adjustment to be done: Yes/(No)/IF necessary

Extra Controls: _____

Special Conditions: 5 org. / rep

Comments: _____

BIOLOGICAL MONITORING, INC.
Toxicity Test Condition Summary

Client: Omega Protein

Prepared by: Anthony Smith

NPDES Permit #: N/A

Experiment ID#: OMP092502-4

Test Organism: Mysidopsis bahia

Test Type: Static Acute

Organism Age at Start of Test: 2 d

Sample Tested: Top of Pond #4 Cell

Sample Type: Grab

Sample Collection Frequency and Dates and Times: 09/24/02 @ 0715

Sample Collector: Andy Hall

Delivered by: UPS

Test Solution Renewal Frequency: N/A

Dilution Water Used: SS092402

Test Temperature: 25 ± 1°C

No. of Replicates per conc.: 2

No. of Organisms per Replicate: 10

Feeding prior to test: Normal

Feeding Regime: 2x daily

Chamber Size: 800 mL PP

Test Volume: 450 mL

Photo Period: 16h light/8h dark

Test Duration: 48 h

Start of Test: Date: 09/25/02

Time: 1650

End of Test: Date: 09/27/02

Time: 1557

Equipment:

pH Meter: SA 720 (A)
DO Meter: YSI 58 (b)
SCT Meter:YSI 33 (A)
°C Measurement: Calibrated Thermometer
Salinity: SCT Meter
Chlorine: Fisher/Porter Amperometric Titrator

Test Method Reference: U.S. EPA. 1993. Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms. EPA/600/4-90/027F.

BIOLOGICAL MONITORING, INC.
Acute Toxicity Test Data Summary

Client	Omega Protein	**NPDES PERMIT #:** N/A		
Test Organism	Mysidopsis bahia		**Date**	**Time**
Experiment ID	OMP092502-4	**Start Test**	09/25/02	1650
Sample Tested	Top of Pond #4 Cell	**End Test**	09/27/02	1557

RESULTS

Water Chemistry Analyses
(Range)

Conc. %	Temp. (°C)	D.O. (mg/L)	pH	Salinity (ppt)	Survival (%) 48 h
0	25	5.0-5.6	7.7-7.9	25	100
6.25	25	5.1-5.7	7.9-8.0	25	100
12.5	25	5.0-5.7	7.9-8.0	25	100
25	25	5.1-5.7	7.9-8.0	25	100
50	25	5.1-5.8	8.0-8.1	25	100
100	25	5.1-5.8	8.1-8.2	25	100

STATISTICAL ANALYSES

Test Method	LC50 (%)	95% Confidence Limits
N/A	>100	N/A

COMMENTS: No LC50 generated due to lack of mortality.

ACUTE TEST DATA REVIEW CHECKLIST

ermit Number VA 0003867 Outfall 002 Permittee Omega Top of Pond #4 cell

Test Date 9/25-27/02 Period Reviewed: QT ✓ SA ___ AN ___ Other ___
1st ___ 2nd ___ 3rd ✓ 4th ___

Testing Laboratory BMI

#	ACUTE DATA PARAMETER - (Some are organism specific)	YES	NO
1.	Was the test performed as per schedule? NA		
2.	Was the correct test performed? Pass control test		
3.	**Was the correct type of sample used?** " " "		
4.	Were pH, temp, Cl of sample checked at sample site (or within 15 minutes of sample retrieval)?		ple site (o
5.	**Was the sample packed in ice and chilled to ≤4° C for transport? NOTE: Frozen samples are not valid!**	✓	
6.	Were pH, DO, Cl, temperature and sample description recorded upon receipt?	✓	
7.	Does description (visual, scent) of sample (when received at lab) seem typical for this type of facility?	✓	
8.	**Was the test initiated within 36 hours of sample retrieval from sampler?**	✓	mple ret
9.	a. Was the sample DO ≥ 4.0 mg/l and ≤ saturation at 25° C prior to test initiation? (applies to *D. ulex, C. dubia, M. bahia, P. promelas, C. variegatus*) b. Was the sample DO ≥ 6.0 mg/l and ≤ saturation at 12° C prior to test initiation? (applies to *O. ykiss*)	✓	egatus)
10.	If 9 is "NO", was the DO adjusted to the acceptable range (see a. and b. above) prior to test initiation?	NA	
11.	If the sample had a chlorine residual, was it dechlorinated?	NA	
12.	**Did the permit allow for dechlorination of the sample? (Only if it contains a compliance schedule for Cl limit or for dechlorination)**	NA	
13.	If the sample was dechlorinated, were controls treated with the same amount of dechlorination agent and run with untreated controls? (determines adverse effect of agent)	NA	
14.	Was the sample pH within the 6.0 - 9.0 range?	✓	
15.	**Was the age of the organisms in the correct range at test initiation?** ***a.*** ***P. promelas and C. variegatus* - 1-14 days old, within 24 hours of age of each other** ***b.*** ***O. mykiss* - 15-30 days old** ***c.*** ***D. pulex and C. dubia* - <24 hours old** ***d.*** ***M. bahia* - 1-5 days old, within 24 hours of age of each other** 1 day	✓	
16.	Were 5 geometric test concentrations (preferably 0.5 series) and 1 control set up?	✓	
17.	Was the test chamber size acceptable? *a.* *P. promelas, C. variegatus, M. bahia* - 250 ml minimum *b.* *O. mykiss* - 5000 ml minimum *c.* *D. pulex and C. dubia* - 30 ml minimum 500ml	✓	
18.	Was the sample volume acceptable? *a.* *P. promelas, C. variegatus, M. bahia* - 200 ml minimum *b.* *O. mykiss* - 4000 ml minimum *c.* *D. pulex* - 25 ml minimum 450 ml	✓	

#	ACUTE DATA PARAMETER - (Some are organism specific)	YES	NO
	d. *C. dubia* - 15 ml minimum		
19.	Was the minimum number of replicates per concentration represented? *a.* 2 replicates - *P. promelas, O. mykiss* *C. variegatus, M. bahia* *b.* 4 replicates - *D. pulex, C. dubia*	✓	
20.	Was the minimum number of organisms in each replicate? *a.* 10 organisms - *P. promelas, O. mykiss* *C. variegatus, M. bahia* *b.* 5 organisms - *D. pulex, C. dubia*	✓	
21.	a. Was the dilution water synthetic moderately hard water or 20% DMW? (applies to freshwater pecies *P. promelas, O. mykiss, D. pulex, C. dubia)* 25°C b. Was the dilution water synthetic moderately hard water or 20% DMW that had been adjusted to 20 2 ppt, or the same salinity as the receiving water? (applies to salt water species, *C. variegatus, M. bahia)*		✓
22.	Was the dilution water hardness within the 80-100 mg $CaCO_3$/L? NA		
23.	Was the dilution water hardness within the 60-70 mg $CaCO_3$/L? NA		
24.	Was the dilution water pH within the range of 7.4 – 7.8 (7.9 – 8.3 for mineral water)? 7.9	—	
25.	**a. Was the test temperature 25±1° C upon initiation, and throughout the test? (applies to *P. romelas, D. pulex, C. dubia C. variegatus, M. bahia)*** **b. Was the test temperature 12±1° C upon initiation, and throughout the test? (applies to *O. mykiss)***	✓	
26.	**Was the temperature measured daily in one replicate of each concentration?**	—	
27.	Was the DO measured daily in one replicate of each concentration? (Exceptions to this requirement are for tests using *D. pulex* or *C. dubia*, where the 24-hr DO reading can be omitted to prevent organism stress.)	—	
28.	If the DO dropped to <4.0 mg/l, was aeration initiated? (Exceptions to this requirement are for tests *using D. pulex or C. dubia*, where aeration is impractical.)	NA	
29.	If aeration was necessary (and acceptable), were all test chambers aerated for the duration of the test, and the time at which aeration was initiated recorded?	NA	
30.	If aeration was necessary (and acceptable), was it applied at a maximum rate of 100 bubbles/minute so as not to cause injury to the organisms?	NA	
31.	Was pH measured at the beginning and end of the test (daily is optimal) for a 48-hour test, or at 0, 48 hours, after renewal, and at 96 hours for a 96-hour test in one replicate of each sample concentration?	—	
32.	a. For a freshwater test, was conductivity measured at the beginning and end (also at renewal for 96-our tests) of the test in one replicate of each concentration? (applies to freshwater species *P. promelas, O. ykiss, D. pulex, C. dubia)* b. For a saltwater test, was salinity measured at the beginning and end (also at renewal for 96-hour sts) of the test in one replicate of each concentration? (applies to salt water species, *C. variegatus, M. ahia)* Daily	✓	
33.	For freshwater tests, was the alkalinity measured in 100% effluent and the control at the beginning of the test?	NA	
34.	For freshwater tests, was the hardness measured in 100% effluent and the control at the beginning of the test?	NA	
35.	a. For a test using *Mysidopsis bahia*, were the mysids fed *Artemia* nauplii daily? 2x/day b. For a 96-hour test using either *Pimephales promelas* or *Cyprinodon variegatus*, were the larvae ed prior to sample renewal at 48 hours?	—	
36.	For a 96-hour test using either *Pimephales promelas* or *Cyprinodon variegatus*, was the sample used for	NA	

#	ACUTE DATA PARAMETER - (Some are organism specific)	YES	NO
	renewal the original sample?		
37.	Was the daily photoperiod 16 hours light/8 hours dark?	✓	
38.	Were the surviving organisms counted daily in all test chambers?	✓	
39.	Was the test terminated at 48±1 hours (less than 47 hours invalidates the test) or 96±1 hours (less than 95 hours invalidates the test)?	✓	
40.	Was the percent survival in each concentration recorded at the end of the test?	✓	
41.	**Was the percent survival in the controls ≥90%?**	✓	
42.	Was the LC_{50} correctly determined?	✓	
43.	If the acute test was run in conjunction with a chronic test using the same species, was the acute test initiated with the second or third sample pulled for the chronic test? (Any sample other than the same sample used to initiate the chronic test is acceptable.)	NA	

Items in bold type (and shaded) are significant in that if they are answered "NO", the test is automatically deemed "not acceptable" and must be repeated to fulfill permit TMP requirements. Bold type items are numbers 3, 5, 8, 12, 15, 25, 26, and 41.

RESPONSE GUIDE

1. - 8.	Response should be "YES" or note the problem in the review
9. - 10.	If 9. is "NO", then 10. must be "YES" or the test is not acceptable
11. - 13.	If 11. is "YES", then 12. and 13. must be "YES" or the test is not acceptable
14. - 17.	If 14. is "NO", then 15., 16. and 17 must be "YES" or the test is not acceptable
18. - 43.	Response should be "YES" or note the problem in the review

RATING

ACCEPTABLE	NOT ACCEPTABLE

Comments

BIOLOGICAL MONITORING, INC.

TOXICITY TEST DATA SHEET

Experiment I.D. #: OMP092502-4 NPDES#: NA Client: Omega Protein Outfall/Station No: Topo & Pond #4

Effluent/Sample: OMP092502-2 Sample Container: PE Project Scientist: Bryan A. Mantyla QC Officer:

Sample Type:
Grab: ✓
Collection Date: 092402 Time: 7:15
Composite:
Collected From: Date: Time:
Collected To: Date: Time:

Test Organism:
Species: *Mysidopsis bahia*
Source: ABS
Batch#: ABS 092402
Age: 1 Day
No. of organisms/ con. 20

Test Mode: Static Acute Test Duration: 48h
Test Start Date: 9/25/02 Time: 1650
Test End Date: 9/27/02 Time: 1557
Test Temperature: 25 ± 1°C Waterbath/Shelf#: 1/2
Dilution Water Used: SS 092402 Temp. of Org. Stock Solution: 25

Con. % or mg/L	Test Cont. #	Number of Live Organisms					Dissolved Oxygen (mg/L)					pH					Salinity 0/00					Temperature (°C)				
		0	24	48	72	96	0	24	48	72	96	0	24	48	72	96	0	24	48	72	96	0	24	48	72	96
C	A	10	10	10			5.6	5.0	5.5			7.9	7.9	7.7			25	25	25			25	25	25		
	B	10	10	10																						
6.25	A	10	10	10			5.7	5.1	5.5			7.9	8.0	7.9			25	25	25			25	25	25		
	B	10	10	10																						
12.5	A	10	10	10			5.7	5.0	5.5			8.0	8.0	7.9			25	25	25			25	25	25		
	B	10	10	10																						
25	A	10	10	10			5.7	5.1	5.4			8.0	8.0	7.9			25	25	25			25	25	25		
	B	10	10	10																						
50	A	10	10	10			5.8	5.1	5.6			8.0	8.1	8.1			25	25	25			25	25	25		
	B	10	10	10																						
100	A	10	10	10			5.8	5.1	5.6			8.1	8.2	8.2			25	25	25			25	25	25		
	B	10	10	10																						
Recorded By:		BM	BM	BM			BM	BM	BM			BM	BM	BM			BM	BM	BM			BM	BM	BM		

BIOLOGICAL MONITORING , INC.
Toxicity Test Procedure Check Sheet

Page _____ of _____

Test I.D. #: OMP092502-4 Test containers used: P.P. Specify below no. milliliters (mLs) of diluent and effluent measured out per concentration in this test:

No. of replicates per concentration: 2

Are all test chambers properly labeled? yes

Specify vessel type and volume used to measure and deliver effluent and diluent to test chambers:

graduated cylinder (s): 1000, 500, 250, 100, pipet (s): _____

volumetric flask (s): _____ other _____

Concentration (%) mg/L Other	Diluent	Effluent	Total
0	1000	0	1000
6.25	937.5	62.5	1000
12.5	875	125	1000
25	750	250	1000
50	500	500	1000
100	0	1000	1000

Specify material (s) used to place test organisms into test chambers: wide bore pipet

Total Chlorine of sample upon arrival (mg/L): _____

Total Chlorine of sample after dechlorination (mg/L): _____

Pretest treatment for organisms: _____

Exposure Chamber
Total vessel capacity: 800mL
Test solution volume: 450mL
Water Depth Constant: ✓
Cyclic: _____

Feeding schedule
Pretest feeding: _____
Not fed: _____
Fed daily: 2x
Fed irregularly (describe) _____
_____
Type of food: live rinsed artemia

Aeration
Pretest: _____
None: ✓
Slow: _____ (bubbles/min)
Moderate: _____
Vigorous: _____
Beginning: _____ (hour)

Screened Animal Enclosures
Not used: ✓
Used: _____
Photoperiod:
8h/16h: ✓
Other: _____

Conditions of surviving organisms at end of test: Normal

Methods of randomization employed: Random #

Comments: _____

BMI **BIOLOGICAL MONITORING, INC.**
LABORATORY WORK ORDER

№ 11202

Project Manager: A. Smith

Date: 9/25/02

Assigned to: _____

Test Start Date: 9/25/02

Client: Omega Protein

Client's P.O.#: _____

Test ID#: OMP092502-4

BMI Project #: 3291

Test Description: SAMP

Test Prefix: OMP

Test Conditions (Circle Appropriate Choice)

(Acute)/Chronic

Organism: P.p., D.p., D.m., C.d., (M.b.), C.v., H.a., Ct
Other: _____

Toxicant: Top of #4 pond
Permit No.#: NA

Duration: 24h, (48h), 96h, 7d, 3 brood _____
Renew at: 24h, 48h, 96h, daily, none, _____

Test Vol: 450 ml
Chamber: 800 ml

Concentrations: [0, 6.25, 12.5, 25, 50, 100%]
Other: _____

IWC: _____

Replicates: 1, (2), 3, 4, 8, 10
Diluent: MHRW, Surface, Synthetic Seawater

Other: _____

Temperature: 12 ± 1°C, 20 ± 1°C, 23 ± 1°C, (25 ± 1°C)
Test Salinity: Freshwater, 13 ppt, (20 ppt)

Feeding: 1 x daily, (2 x daily), 3 x daily, none, as specified _____

Dechlorination Sample: Yes/(No) (Circle One)
pH Adjustment to be done: Yes/(No)/IF necessary

Extra Controls: _____

Special Conditions: Ice house test

Comments: _____

10978

SAMPLE COLLECTION - CHAIN OF CUSTODY FORM

To be completed by the person collecting the sample. See reverse side for instructions.

1. Client name Omega Protein
2. Sampler's name Andy Hall
3. Sample source Top of pipe #4 Pond
4. Outfall/station Non - NPDES
5. Purchase order no.
6. Affiliation Prod. Mgr.
7. NPDES permit no./County
8. Test period for which data is being submitted:

9. *Samplerelinquishedby:* Andy Hall 9.24/02 *Date;Receivedby:* Beyn A. Mackey 9/25/02 *Date;*

Samplerelinquishedby: / *Date;Receivedby:* / *Date.*

Description of Sampling Methods and Equipment

10. Type of sample collected:
Grab ✓
Date collected 9-24-02
Time collected 7:15 AM
Volume 1-GAL
Composite
Composite type
Collection period: from (date) (time) to (date) (time)

11. Flow during sampling 145,400
12. Type of container 1 GAL PLASTIC
13. Number of containers shipped 1
14. No. of subsamples
15. Frequency
16. Volume

Condition of Effluent at Time of Collection

17. pH 7.44
18. Chlorine
19. Temperature:
At collection point
In collection device (comp. sample must be @ or below 4°C) yes
20. Is the sample:
Chlorinated
Dechlorinated
Unknown
Dechlorination method

Shipping Information

21. Method of shipment UPS
22. Date shipped 9/24/02
23. Time Approx 2:30
24. Was the sample packed with ice for shipment? yes
25. *Custody seal in place by* J.R. Hall *Date* 9/24/02 *Time* 1:00pm

Instructions to Lab

26. Type of test(s) to be performed
27. Should BMI dechlorinate the sample (Yes or No)
28. Should ammonia be measured? (Yes or No)
29. Comments

30. I certify that the above information is correct John A Hall
Signature Date

****

For BMI Use Only

Alk NA
Hard NA
BMI Sample ID# OMP092502-2 *Received by* B. Mackey *Date* 9/25/02 *Time* 11:30
Upon arrival at BMI: Custody seal ✓ Temperature 3°c pH 8.3 Chlorine <0.01 mg/L DO 10.7
On ice? ✓ Salinity 5ppt Conductivity 900
Visual description Slightly Stained Sample refrigerated yes
Test ID number(s) OMP092502-4

11/01

BIOLOGICAL MONITORING, INC.

1800 Kraft Drive, Suite 101 • Blacksburg, VA 24060 • Tel 540-953-2821 • Fax 540-951-1481

e-mail: bmi@biomon.com • website: http://www.biomon.com

cc: Jody Bryan 12-14-01

ACUTE TEST DATA REVIEW CHECKLIST

ermit Number VA 0003867 Outfall 002 Permittee Omega

Test Date 11/14-16/01 Period Reviewed: QT ___ SA ___ AN ___ Other ___
1st ___ 2nd ___ 3rd ___ 4th ___

Testing Laboratory BMT

#	ACUTE DATA PARAMETER - (Some are organism specific)	YES	NO
1.	Was the test performed as per schedule?	✓	
2.	Was the correct test performed?	✓	
3.	**Was the correct type of sample used?**	✓	
4.	Were pH, temp, Cl of sample checked at sample site (or within 15 minutes of sample retrieval)? pH	✓	ple site (o with
5.	**Was the sample packed in ice and chilled to ≤4° C for transport? NOTE: Frozen samples are not valid!**	✓	
6.	Were pH, DO, Cl, temperature and sample description recorded upon receipt?	✓	
7.	Does description (visual, scent) of sample (when received at lab) seem typical for this type of facility?	✓	
8.	**Was the test initiated within 36 hours of sample retrieval from sampler?**	✓	mple retrieval
9.	a. Was the sample DO ≥ 4.0 mg/l and ≤ saturation at 25° C prior to test initiation? (applies to *D. ulex, C. dubia, M. bahia, P. promelas, C. variegatus*) b. Was the sample DO ≥ 6.0 mg/l and ≤ saturation at 12° C prior to test initiation? (applies to *O. ykiss*)	✓	riegatus)
10.	If 9 is "NO", was the DO adjusted to the acceptable range (see a. and b. above) prior to test initiation?	NA	
11.	If the sample had a chlorine residual, was it dechlorinated?	NA	
12.	**Did the permit allow for dechlorination of the sample? (Only if it contains a compliance schedule for Cl limit or for dechlorination)**	NA	
13.	If the sample was dechlorinated, were controls treated with the same amount of dechlorination agent and run with untreated controls? (determines adverse effect of agent)	NA	
14.	Was the sample pH within the 6.0 - 9.0 range? 8.1	✓	
15.	**Was the age of the organisms in the correct range at test initiation?** ***a.*** ***P. promelas and C. variegatus* - 1-14 days old, within 24 hours of age of each other** ***b.*** ***O. mykiss* - 15-30 days old** ***c.*** ***D. pulex and C. dubia* - <24 hours old** ***d.*** ***M. bahia* - 1-5 days old, within 24 hours of age of each other** 3d	✓	
16.	Were 5 geometric test concentrations (preferably 0.5 series) and 1 control set up? according to permit or 100 %		
17.	Was the test chamber size acceptable? *a.* *P. promelas, C. variegatus, M. bahia* - 250 ml minimum *b.* *O. mykiss* - 5000 ml minimum *c.* *D. pulex and C. dubia* - 30 ml minimum 800	✓	
18.	Was the sample volume acceptable? *a.* *P. promelas, C. variegatus, M. bahia* - 200 ml minimum *b.* *O. mykiss* - 4000 ml minimum *c.* *D. pulex* - 25 ml minimum 450	✓	

CHRONIC 7-DAY SURVIVAL, GROWTH AND FECUNDITY TEST WITH MYSIDOPSIS BAHIA

Day of test Date		NUMBER OF SURVIVING MYSIDS PER DAY								FEMALE WITH EGGS	FEMALE NO EGGS	MALE	NOT MATURE
		DAY 0 / /	DAY 1 / /	DAY 2 / /	DAY 3 / /	DAY 4 / /	DAY 5 / /	DAY 6 / /	DAY 7 / /				
CONC:	A												
	B												
	C												
	D												
	E												
	F												
	G												
	H												
Totals													
CONC:	A												
	B												
	C												
	D												
	E												
	F												
	G												
	H												
Totals													
CONC:	A												
	B												
	C												
	D												
	E												
	F												
	G												
	H												
Totals													
CONC:	A												
	B												
	C												
	D												
	E												
	F												
	G												
	H												
Totals													
CH/TIME													

#	ACUTE DATA PARAMETER - (Some are organism specific)	YES	NO
	d. *C. dubia* - 15 ml minimum		
19.	Was the minimum number of replicates per concentration represented? *a.* 2 replicates - *P. promelas, O. mykiss* *C. variegatus, M. bahia* *b.* 4 replicates - *D. pulex, C. dubia* permit states 4 replicates	✓ 4 repl	
20.	Was the minimum number of organisms in each replicate? *a.* 10 organisms - *P. promelas, O. mykiss* *C. variegatus, M. bahia* *b.* 5 organisms - *D. pulex, C. dubia* permit says 20/exposure ÷ 4 repl = 5/repl	✓ 5/repl	
21.	a. Was the dilution water synthetic moderately hard water or 20% DMW? (applies to freshwater species *P. promelas, O. mykiss, D. pulex, C. dubia)* b. Was the dilution water synthetic moderately hard water or 20% DMW that had been adjusted to 20 2 ppt, or the same salinity as the receiving water? (applies to salt water species, *C. variegatus, M. bahia)*	OR synthetic SW @ 18-20ppt - receiving water 21pt	
22.	Was the dilution water hardness within the 80-100 mg $CaCO_3$/L?	NA	
23.	Was the dilution water hardness within the 60-70 mg $CaCO_3$/L?	NA	
24.	Was the dilution water pH within the range of 7.4 – 7.8 (7.9 – 8.3 for mineral water)?	8.30 SU	?
25.	**a. Was the test temperature 25±1° C upon initiation, and throughout the test? (applies to *P. promelas, D. pulex, C. dubia C. variegatus, M. bahia)*** **b. Was the test temperature 12±1° C upon initiation, and throughout the test? (applies to *O. mykiss)***	✓	
26.	**Was the temperature measured daily in one replicate of each concentration?**	✓	
27.	Was the DO measured daily in one replicate of each concentration? (Exceptions to this requirement are for tests using *D. pulex* or *C. dubia*, where the 24-hr DO reading can be omitted to prevent organism stress.)	✓	
28.	If the DO dropped to <4.0 mg/l, was aeration initiated? (Exceptions to this requirement are for tests *using D. pulex or C. dubia*, where aeration is impractical.)	NA	
29.	If aeration was necessary (and acceptable), were all test chambers aerated for the duration of the test, and the time at which aeration was initiated recorded?	NA	
30.	If aeration was necessary (and acceptable), was it applied at a maximum rate of 100 bubbles/minute so as not to cause injury to the organisms?	NA	
31.	Was pH measured at the beginning and end of the test (daily is optimal) for a 48-hour test, or at 0, 48 hours, after renewal, and at 96 hours for a 96-hour test in one replicate of each sample concentration?	✓	
32.	a. For a freshwater test, was conductivity measured at the beginning and end (also at renewal for 96-hour tests) of the test in one replicate of each concentration? (applies to freshwater species *P. promelas, O. mykiss, D. pulex, C. dubia)* b. For a saltwater test, was salinity measured at the beginning and end (also at renewal for 96-hour tests) of the test in one replicate of each concentration? (applies to salt water species, *C. variegatus, M. bahia)*	daily	
33.	For freshwater tests, was the alkalinity measured in 100% effluent and the control at the beginning of the test?	NA	
34.	For freshwater tests, was the hardness measured in 100% effluent and the control at the beginning of the test?	NA	
35.	a. For a test using *Mysidopsis bahia*, were the mysids fed *Artemia* nauplii daily? fed 2x/daily - type of food not noted b. For a 96-hour test using either *Pimephales promelas* or *Cyprinodon variegatus*, were the larvae fed prior to sample renewal at 48 hours?		
36.	For a 96-hour test using either *Pimephales promelas* or *Cyprinodon variegatus*, was the sample used for	NA	

#	ACUTE DATA PARAMETER - (Some are organism specific)	YES	NO
	renewal the original sample?		
37.	Was the daily photoperiod 16 hours light/8 hours dark?	✓	
38.	Were the surviving organisms counted daily in all test chambers?	✓	
39.	Was the test terminated at 48±1 hours (less than 47 hours invalidates the test) or 96±1 hours (less than 95 hours invalidates the test)?	✓	
40.	Was the percent survival in each concentration recorded at the end of the test?	✓	
41.	**Was the percent survival in the controls ≥90%?**	✓	
42.	Was the LC_{50} correctly determined?	✓	
43.	If the acute test was run in conjunction with a chronic test using the same species, was the acute test initiated with the second or third sample pulled for the chronic test? (Any sample other than the same sample used to initiate the chronic test is acceptable.)	NA	

Items in bold type (and shaded) are significant in that if they are answered "NO", the test is automatically deemed "not acceptable" and must be repeated to fulfill permit TMP requirements. Bold type items are numbers 3, 5, 8, 12, 15, 25, 26, and 41.

RESPONSE GUIDE

1. - 8.	Response should be "YES" or note the problem in the review
9. - 10.	If 9. is "NO", then 10. must be "YES" or the test is not acceptable
11. - 13.	If 11. is "YES", then 12. and 13. must be "YES" or the test is not acceptable
14. - 17.	If 14. is "NO", then 15., 16. and 17 must be "YES" or the test is not acceptable
18. - 43.	Response should be "YES" or note the problem in the review

RATING

ACCEPTABLE	NOT ACCEPTABLE

Comments

Mosca,Denise

From: Bill Black [bilenpro@swbell.net]
Sent: Wednesday, October 16, 2002 1:40 PM
To: Mosca,Denise
Subject: RE: Omega

Omega amm and cyanide and cree...

Denise, Here is a spreadsheet that contains additional ammonia and cyanide.

Do you know if Curt received the Dye Tracer report??

Bill

-----Original Message-----
From: Mosca,Denise [mailto:dmmosca@deq.state.va.us]
Sent: Tuesday, October 15, 2002 2:37 PM
To: Bill Black
Subject: RE: Omega

Oh, sure, his is cjlinderma@deq.state.va.us His name is too long to pick up the n at the end of his name in the email address.
denise

Denise M. Mosca
Environmental Engineer Sr.
DEQ-Kilmarnock Field Office
P.O. Box 669
Kilmarnock, Va. 22482
804-435-3181
fax 804-435-0485

> -----Original Message-----
> From: Bill Black [SMTP:bilenpro@swbell.net]
> Sent: Tuesday, October 15, 2002 3:33 PM
> To: Mosca,Denise
> Subject: RE: Omega
>
> Denise, I emailed both the report and the data to Dale and he received
> it. I can try to email to Curt but need his email address.
> Bill
>
> -----Original Message-----
> From: Mosca,Denise [mailto:dmmosca@deq.state.va.us]
> Sent: Tuesday, October 15, 2002 1:00 PM
> To: Bill Black
> Subject: RE: Omega
>
> OK, got that!
> denise
>
> Denise M. Mosca
> Environmental Engineer Sr.
> DEQ-Kilmarnock Field Office
> P.O. Box 669

> Kilmarnock, Va. 22482
> 804-435-3181
> fax 804-435-0485
>
> > -----Original Message-----
> > From: Bill Black [SMTP:bilenpro@swbell.net]
> > Sent: Tuesday, October 15, 2002 12:52 PM
> > To: Mosca,Denise
> > Subject: RE: Omega
> >
> > Denise, it looks like it takes "days" for you to receive emails with
> > huge attachments. Since Thursday when I sent the two emails you just
> > received, I have finished the Dye Tracer report and have made some
> > corrections. Therefore, discard what you have received by email and
> wait
> > for the Fedex man to deliver a CD today which has the final report
and
> > all data.
> >
> > Bill
> >
> > -----Original Message-----
> > From: Mosca,Denise [mailto:dmmosca@deq.state.va.us]
> > Sent: Tuesday, October 15, 2002 9:21 AM
> > To: Bill Black
> > Subject: RE: Omega
> >
> > I got both emails ok, Bill--
> > denise
> >
> > Denise M. Mosca
> > Environmental Engineer Sr.
> > DEQ-Kilmarnock Field Office
> > P.O. Box 669
> > Kilmarnock, Va. 22482
> > 804-435-3181
> > fax 804-435-0485
> >
> > > -----Original Message-----
> > > From: Bill Black [SMTP:bilenpro@swbell.net]
> > > Sent: Thursday, October 10, 2002 4:22 PM
> > > To: Mosca,Denise
> > > Subject: Omega
> > >
> > > Denise, I will send two emails, this one contains the text.
> > > Bill << File: header.htm >> << File: Dye Narrative rev 1.doc >>
> >
> >
> >
>

Omega Protein--Reedville
Sampling Results for **CYANIDE**

	Omega Effluent			Cockrell Creek water			
Date	Outfall 001 (future)	Outfall 004/005	Outfall 002	at Intake of 001	End of Mainstreet Reedville	Between Omega & Ampro	Type of Sample
10/18/01	<.01	<.01	<.01				water
11/15/01	0.042*						water
12/4/01	1.762*						water
5/9/02				0.02			water
8/12/02				<.01	<.01	<.01	water
8/13/02				0.1			SLUDGE
8/15/02	0.03						water
8/15/02	0.09						water
8/19/02					0.01	0.03	water
8/20/02	0.12						water
8/21/02	0.17		<.01				water
8/22/02	<.01						water
8/22/02	<.01		<.01				water
8/26/02					0.02	0.03	water
9/3/02					0.44	0.79	water
9/4/02	2.99						water
9/5/02	2.05						water
9/5/02	0.48						water
9/6/02	0.14						water
9/9/02					<.01	<.01	water
9/10/02	<.01						water
9/11/02	0.059						water
9/13/02	0.005						water
9/13/02	<.005						water
9/16/02					<.005	<.005	water
9/17/02	0.010						water
9/19/02	0.019						water
9/19/02	0.009						water
9/22/02					0.009	0.043	water
9/24/02	0.089						water
9/25/02	0.070						water
9/26/02	0.048						water
9/27/02	0.198						water
9/30/02					<.005	0.042	water
10/1/02	0.075						water
10/2/02	0.341						water
10/3/02	0.170						water

1) The Monday sampling of Creek media is performed in an effort to remove any influence of the discharge from Omega's processing. Omega usually completes processing for the week on Saturdays. Thus, by Monday, the Creek would have had two days to flush itself out by tidal action without any Omega discharges.

2) The sample taken on Tuesday September 3 was the day after Labor Day (Omega did not fish on Labor Day)--there likely was a lot of boat traffic on Cockrell Creek on Labor Day that might have agitated bottom sludges.

3) The sampling of 5/9/02 was before fishing had started for 2002

4) Data from the 001 and 004/005 samples taken in 2001 (indicated by an *) are questionable due to possible cross communication

5) Starting with the 9/13/02 sample, the Detection Limit was lowered to 0.005. According to the lab, it is not possible for lower Detection Limits.

OMEGA PROTEIN

FAX

TO: DENISE MOSCA **FAX:**

FROM: LYELL JETT **PHONE:** 435-0485

DATE: 12-11-02 **PAGES:** 6

SUBJECT: _____

BMP reports Nov. 2002

P.O. Box 175. Reedville, Virginia 22539, Telephone 804-453-4211, Fax 804-453-4475

ATTACHMENT C
DEPARTMENT OF ENVIRONMENTAL QUALITY
BMP Compliance Report

Facility Name: Omega Protein
Address: Reedville, Va.

VPDES Permit No.: VA0003867

Report Period: From 11/1/02 To 11/2/02

Paint Area	COMPLIANCE	NONCOMPLIANCE*
	✓	

*Comments on Noncompliance

Name of Principal Exec. Officer or Authorized Agent / Title

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. See 18 U.S.C. paragraph 1001 and 33 U.S.C. paragraph 1319. (Penalties under these statutes may include fines up to $10,000 and or maximum imprisonment of between 6 months and 5 years).

Graham Lysell Jett 12-2-02

Signature of Principal Officer or Authorized Agent / Date

ATTACHMENT C
DEPARTMENT OF ENVIRONMENTAL QUALITY
BMP Compliance Report

Facility Name: Omega Protein
Address: Reedville, Va.

VPDES Permit No.: VA0003867

Report Period: From 11/3/02 To 11/9/02

Paint Area	COMPLIANCE (check as appropriate)	NONCOMPLIANCE* (check as appropriate)
_____	✓	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

*Comments on Noncompliance

Dan [illegible] Vessel Manager
Name of Principal Exec. Officer or Authorized Agent / Title

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. See 18 U.S.C. paragraph 1001 and 33 U.S.C. paragraph 1319. (Penalties under these statutes may include fines up to $10,000 and or maximum imprisonment of between 6 months and 5 years).

Graham Lyell Jeet 12-2-02
Signature of Principal Officer or Authorized Agent / Date

ATTACHMENT C
DEPARTMENT OF ENVIRONMENTAL QUALITY
BMP Compliance Report

Facility Name: Omega Protein
Address: Reedville, Va.

VPDES Permit No.: VA0003867

Report Period: From 11/10/02 To 11/16/02

Paint Area	COMPLIANCE (check as appropriate)	NONCOMPLIANCE *
	✓	

*Comments on Noncompliance

Name of Principal Exec. Officer or Authorized Agent / Title

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. See 18 U.S.C. paragraph 1001 and 33 U.S.C. paragraph 1319. (Penalties under these statutes may include fines up to $10,000 and or maximum imprisonment of between 6 months and 5 years).

Signature of Principal Officer or Authorized Agent / Date 12/2/02

ATTACHMENT C
DEPARTMENT OF ENVIRONMENTAL QUALITY
BMP Compliance Report

Facility Name: Omega Protein
Address: Reedville, Va.

VPDES Permit No.: VA0003867

Report Period: From 11/1/02 To 11/23/02

Paint Area	COMPLIANCE	NONCOMPLIANCE *
	(check as appropriate)	
	✓	

*Comments on Noncompliance

Name of Principal Exec. Officer or Authorized Agent / Title

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. See 18 U.S.C. paragraph 1001 and 33 U.S.C. paragraph 1319. (Penalties under these statutes may include fines up to $10,000 and or maximum imprisonment of between 6 months and 5 years).

Graham Lyall Scott 12-2-02

Signature of Principal Officer or Authorized Agent / Date